

THE AMERICAN NEPTUNE

MARITIME HISTORY & ARTS



VOLUME SIXTY, NUMBER Two

NORTHEAST AUCTIONS

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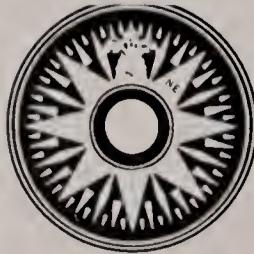
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THE AMERICAN NEPTUNE

A Quarterly Journal of Maritime History and Arts

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THE AMERICAN NEPTUNE (ISSN: 0003-0155) is published quarterly by the Peabody Essex Museum, Incorporated, of Salem, Massachusetts, d/b/a Peabody Essex Museum. Officers of the corporation are: John O. Parker, President; Carter H. Harrison, Vice President; C. Richard Carlson, Treasurer; Lea B. Pendleton, Secretary; Richard Wheatland, II, Chairman of the Overseers.

Subscription rates are \$39 for U.S. individuals and \$45 for U.S. institutions. Non-U.S. subscription rates are \$42 for individuals and \$48 for institutions. Periodicals postage paid at Lawrence, Kansas. POSTMASTER: Send address changes to *The American Neptune*, Peabody Essex Museum, East India Square, Salem, Massachusetts 01970. Telephone: 1-978-745-9500, ext. 3042. E-mail: will_lamoy@pem.org or dlphillips2@earthlink.net. Information on the *American*

Neptune is available at our website and can be accessed at www.pem.org/neptune.

Support of the journal depends upon receipts from subscriptions; no payment is made for contributions or for editorial work. Subscriptions are accepted for a one-year period and begin with the issue published following receipt of the order. The editors of the *American Neptune* assume editorial responsibility, but they and the Peabody Essex Museum do not necessarily endorse the opinions expressed by authors and book reviewers. "Guidelines for Contributors" to the *American Neptune*, a style sheet for manuscript preparation, will be sent to prospective contributors upon request to the managing editor.

~~ ON THE COVER ~~

They Kept the Sea Lanes Open

Lithograph by the W. F. Powers Company of New York after a painting by L. A. Shafer, ca. 1918. M21181. The cover image is a detail from a World War I poster.

From the Victory Liberty Loan series.

~ EDITOR-IN-CHIEF'S NOTE ~

You may laugh when you read that the first thing I did after completing the white-knuckler book *The Perfect Storm* by Sebastian Junger, first published 1997 and a hot seller since, was to consult my *West Marine* and other ship chandlery catalogues under the heading of EPIRBs. An EPIRB is an Emergency Position Indicating Radio Beacon—an emergency response system which, if operational and registered at the time of purchase and kept in the “armed” position, ought to give off a distress signal.

That radio signal ought to be picked up by GPS, and then the Coast Guard ought to know the name of the boat, her location, and, as Junger puts it, “that something has gone disastrously wrong.” EPIRBs come in all qualities and are of different types, but in this case something did not function or was not put in such a state so that it could function.

The vessel in question was *Andrea Gail* with a crew of six. They got caught in an October 1991 perfect storm, in which a combination of weather systems converged on waters east of Massachusetts, Maine, and Nova Scotia and played havoc on the fishing vessels (and others) then undertaking their normal work. *Andrea Gail* was swordfishing, and that work takes vessels far from land, requiring larger fuel reserves and heavier provisions and supplies for longer voyages. All of these features, and more, led to the tragedy. We are reminded by this story and others that those who do business in deep waters are in ever present danger. I thought the book would be about a storm, but it ended up as much more. It is about

safety at sea, state regulations and requirements, over-fishing of the sea’s resources, the quest for profits (and attendant risks), and about meteorology. There are many Atlantics, or parts of the North Atlantic Ocean. *Andrea Gail* was halfway home from the Flemish Cap, east of the Grand Banks, when she gave out her last radio message. Probably heading for whatever shelter that graveyard Sable Island could afford, she was lost with all hands. Only a few fuel drums were recovered. The historical recreation of this single episode is a wonderful example of good journalism at work, and, yes, I might just buy my own EPIRB even for Great Lakes cruising.

Disasters at sea seem every day in the news. *The Boston Globe Magazine* of 18 April 1999 carried a story, “The Wreck of the Cape Fear,” another page-turner. This was the story of a New Bedford, Massachusetts, quahogger and two crewmen lost at sea, and it raised questions about complacency and greed in a particular fishery. “Truth is, you know that bad things happen at sea,” Captain Andy Rencurrel, skipper of another quahogger, *Beth & Lisa*, told hard-working journalist David Arnold, “You just trust they’re not going to happen to you.” Two other boats and ten men died in that story of January 1999. The Coast Guard’s Fishing Vessel Casualty Task Force clocked numbers of vessels and men lost. The Coast Guard conducted formal investigations into losses. No prime cause was found; complacency was suggested.

It is good that storms at sea inspire our journalists, and Junger and Arnold should awaken

attention to the plight of mariners. Technology alone cannot be the security. Heavily weighted boats, homeward bound, face the greatest risk. Greed may overcome common sense in the equation. History can count thousands of examples of this tragic form of miscalculation.

And what about maintenance problems, even owners' neglect of hulls? In March 2000 a Greek freighter lost a hull plate and went down in a hurry. Thirteen were rescued by HMCS *Iroquois* north of Bermuda, not far from where *Andrea Gail* perished. Many more were lost at sea. The sagas continue, reminders that we need safer ships and better owners.

This issue commences with the fine research and writing of Hugh Murphy on female riveters in British yards during the Second World War. Using a wide array of sources, Murphy has re-created a world now lost. With his essay he reminds us that many new areas of research need attention, and we are always pleased to publish path-breaking work such as this. How heritage vessels can be saved from rot and other hull decay is the subject of J. S. Dean's splendid article on the San Diego Maritime Museum's *Medea*. This article has important implications for all boards and societies scratching their heads over the inevitable question: how can we keep her from sinking? This fine work is followed by yet another, Charles R. Schultz's inquiry into Methodists and the

California gold fields—by sea. I had not realized until now that the Methodists actually shipped the construction materials and prefabricated structures or parts with them. This is not so surprising when you think about it, but with Methodists, zeal and technique were never in short supply. It is interesting to think about all of this going around Cape Horn. Charles Dana Gibson, who has made a distinguished career of studying this subject, follows on with a discussion of what separated, in law, a public vessel seaman from a merchant marine seaman. Using legal sources, Gibson explains the nuances of the matter. This issue concludes with a never-before published memoir of submarine hunting in the English Channel in 1918, by the U.S. sub chaser SC-35. This excerpt from a longer memoir written by Charles Kane Cobb Jr. is lovingly edited by his son, Charles K. Cobb.

We also print a number of notices, stories, and advertisements. We are always anxious to have communications and concerns about all the matters that are of interest to our readers. As is customary, we print substantial book reviews and numerous notices. Let us hear from you about what you would like to see us print in the way of articles, notices, and reviews.

BARRY GOUGH
EDITOR IN CHIEF

The Peabody Essex Museum gratefully acknowledges the contribution of a grant from Wilfrid Laurier University to assist the editor in chief in the management and production of this journal.

LOST OPPORTUNITIES: WOMEN IN BRITAIN'S PRIVATE WARTIME SHIPYARDS

by Hugh A. Murphy

The wartime role of women in private British shipbuilding and ship repairing firms has received little attention in academic literature, mainly because there is no widely available archival evidence to draw a complete picture of their role on a national scale.¹ Drawing on the records of the Shipbuilding Employers Federation (SEF) and Government sources, however, we can elucidate women's work in the shipyards of Great Britain.²

One of the major changes in work organization and practice which took place in shipbuilding and repair during the war was the agreed introduction of a female workforce; the other was the widespread introduction of electric arc welding. Dilution of the male workforce was an obviously expedient solution to the twin problems of a finite supply of skilled labor, and the need for increased production and repair of ships to prosecute the war effectively. Male labor really had little to fear from any influx of females in the industries. The British Government, noting earlier trade union compliance in signing dilution agreements, all of which temporarily relaxed existing

customs, subsequently enacted the Pre-War Trade Practices Act in February 1942. This Act legislatively enshrined a return to the status quo ante in the industries, but not until eighteen months after cessation of hostilities.³ Despite this, in the early part of the conflict, the upgrading of existing semi- and unskilled male labor undoubtedly delayed the advent of more extensive female dilution, as did trade union insistence on employing their unemployed brethren. By July 1940 Mark Hodgson, the Boilermakers Society general secretary, candidly admitted that "few of his really employable members were out of work."⁴ By this stage, however, his union and others had already signed a national agreement with the SEF on male dilution. As a consequence of this, it was not until mid-1942 that greater numbers of women were employed in shipbuilding yards. In ship repairing no agreement on female dilution was reached until 1943.⁵

By August 1944, when female employment in the industry reached its zenith, women comprised only 6.6 percent of the shipbuilding workforce, and four percent in ship repairing.⁶ Collectively, this was a fivefold increase in percentage terms from an admittedly low base for both industries of two percent in 1939. Seen against female participation rates of sixty percent in electrical engineering and thirty-four percent

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in general engineering, those percentages in shipbuilding and repair are extremely low. If we consider the percentage of women employed in marine engineering, an industry analogous to shipbuilding, women, as Summerfield notes, never exceeded sixteen percent of those employed.⁷ Many shipbuilding firms had their own marine engineering works, so the figures for shipbuilding and repair which discount this cate-

gory do not fully reveal the amount of female dilution in the industries. The late entry of women in shipbuilding and repair is further explained by overseas building for British account, particularly in the United States, where sixty ships totaling 430,500 gross tons were built in 1941 and 1942.⁸ The Lend Lease and the huge American shipbuilding effort meant that by November 1943 the United States had built more



Girls of the Dockyard. Catherine Thompson, a rivet heater, handing down a white hot rivet to the rivetter who is waiting for her assistance on the lower deck of a ship under construction in one of Britain's largest shipbuilding yards. A sizeable proportion of British shipyards resolutely stuck to riveting throughout the war. Photograph courtesy of the Imperial War Museum, London.

tonnage than had been sunk in the war to that date.⁹ The losses to U-boats peaked in the fifteen months from January 1942 to March 1943, when submarines sank eighty-one percent of the 4.1 million gross tons lost. A sense of national emergency was ever present in the first three years of the war, and it was not until late 1943 that the success of countermeasures turned the war against the U-boat.¹⁰

A relatively large amount of skilled women who were employed in SEF yards prior to the war were French polishers engaged in fitting-out, with the majority employed on Clydeside. French polishing was a recognized trade that required a five-year apprenticeship and was open to both males and females. In November 1937, a year where adequate figures remain in the SEF records, the shipbuilding industry employed 196 skilled male French polishers at the full rate of pay and 129 females at a rate of pay of two-thirds of their male counterparts. The corresponding figures for apprentices were fifty-nine males against 136 females, evidence of a definite trend in shipbuilding toward increased female employment in the trade. Other female employment in the industry, excluding staff grades, totaled sixty, mostly ships' cleaners. In percentage terms alone, in contrast to an industry comprising 64,084 employees, the numbers of females employed on the berths was pitifully small. This is also true of the ship repairing industry where only three female skilled French polishers were employed out of 196 women, excluding staff grades, from a total of 26,597 employees. Seen against the combined total of all employees in shipbuilding and repair at November 1937 of 90,681 (by April 1939 the numbers had risen only to 90,699), the numbers of female French polishers are barely significant.¹¹ However, the figures do serve to delineate the proportion of skilled women to men in the industries before the outbreak of the war.

In an industry noted for its inflexible approach to industrial relations, employers and unions were mutually antagonistic to any increase

in female labor. This is illustrated by the attitude of shipbuilders on Clydeside who believed that the presence of women would require "segregation," and that any attempt to introduce them to the shops and berths would serve "no useful purpose." Even if women were admitted into the shipyards, any increase in productivity gained from their introduction would be more than negated by a corresponding loss of output from the men employed.¹² Furthermore, as Mass Observation staff found in visits to Clyde shipyards in 1941, it was not only women whom the Clyde employers mistrusted. An unpublished study reports that several of the most important employers interviewed showed an "almost pathological loathing of their workmen," and that one employer had subjected the interviewers to a "two hour tirade against these animals."¹³ How far these ingrained prejudices were demonstrative of the industry as a whole is at least debatable. In a time of national peril from air, land, and sea, the coalition government in Britain was hardly likely to antagonize the shipbuilding employers. Hence, the rate of female dilution in the early years of the war was painfully slow, although a National Dilution Agreement on female employment in shipbuilding was signed in July 1941.¹⁴ It was ironic that as a result of this agreement women dilutees, after a suitable period of training, would earn more than French polishers employed under pre-war conditions of service. This and the widespread substitution of varnishing, a semi-skilled occupation, left female polishers in an anomalous position throughout the war. Unable to practice their trade and excluded from the higher paying dilution agreements, they could not possibly attain equal pay with their male colleagues. The impact of the war on their trade was almost entirely negative.

Given the nature of the Dilution Agreements and the restoration of pre-war trade practices, it would seem that women entering shipbuilding and repair could have had few illusions that their presence was but a temporary phenomenon.

Shipbuilding and repair, as in World War I, quickly came under government control, but this was never a straightforward matter. Aircraft production and repairs had top priority for labor and material. This was a source of frustration to the shipbuilders, and the industry complained that the fortunate possessors of these priorities were "able to dispense with the necessity of planning their production in any sense which involved the husbanding of resources."¹⁵ Only in March 1941 were shipbuilding and repair designated as essential industries under Emergency Powers (Defence) Regulations.¹⁶

Another factor that held back the rate of female dilution was a strong difference of opinion that had developed early in 1942 between two government departments responsible for shipbuilding and repair, the Admiralty and the Ministry of Labour.¹⁷ The crux of this dispute was the amount of dilution that was in fact possible in the shipyards. In the early years of the war neither the Admiralty nor the Ministry of Labour organization was strong enough to ensure that dilution gathered pace.¹⁸ Another telling factor preventing quicker assimilation of females, particularly in shipbuilding, was the lack of standardization and the consequent subdivision of work in the industry. Accordingly, J. B. Galbraith, the government-appointed Deputy Chief Industrial Commissioner in Scotland, presciently observed in June 1942 that there was on the part of the shipbuilders a "curious apprehension" that the introduction of methods of this kind would have adverse effects on the postwar competitive position of the industry. Galbraith further believed that it was "useless" to talk of more dilution and the introduction of women until changes had actually been introduced. Looking to the future he noted that "it is difficult to conceive how any position may be obtained after the war unless there are revolutionary alterations in processes."¹⁹

Galbraith had earlier lamented in the context of industrial disputes that the employers had an "almost fanatical devotion to procedure."²⁰ This situation was unlikely to change, given the government's choice of civilian appointees to run the mercantile side of the industry the leading shipbuilder, Sir James Lithgow, as Controller of Merchant Shipbuilding and Repair, and his deputy, the equally renowned Sir Amos Ayre. It was not until late 1942 that the Government made it clear to the SEF that any increase in the shipbuilding and repairing workforce must be entirely met by the recruitment of women.²¹

The Government's National Service (No.2) Act, December 1941 had little effect. From 1939 to mid-1942 the number of women employed in shipbuilding and repair had risen only by five hundred.²² Still, more women were employed in the government-controlled Royal Dockyards. At Rosyth Dockyard on Scotland's east coast, five hundred out of 892 women employed were used in a productive capacity.²³ This compared to a total of 279 women who were contemporaneously employed in the five major private shipyards on the east coast of Scotland.²⁴

The government, conscious of the general lack of standardization in shipbuilding and repair, sponsored two reports, and both chairmen, Barlow and Bentham, reported in July and September 1942 respectively. They each highlighted the lack of investment in plant and equipment industry wide, although this was hardly surprising, given the depression years of the 1920s and 1930s. Barlow urged further dilution of labor to raise productivity, and Bentham recommended greater use of electric arc welding than hitherto, with concentration of production of certain classes of ships in distinct yards.²⁵ By June 1943, with the tide of war turning in Britain's favor and shipbuilding and repair crucial to the further prosecution of the war, Ernest Bevin, the Minister of Labour and National Service, was eager to foster a further increase in female dilution in shipbuilding. The illustrated booklet, *Women in*

Shipbuilding, written by Miss V. Holmes, was produced. This and a circular letter signed by Bevin, A. V. Alexander, the First Lord of the Admiralty, Louis Dunlop, the president of the SEF, and Mark Hodgson of the Boilermakers Society was sent to every shipyard in England.²⁶

The booklet and letter came at a crucial time of the war. The signatories advanced the view that there were few occupations in which women were incapable of performing "if due toleration was shown." This had been demonstrated by "the amazing capacity that has been shown for all kinds of work in all kinds of industries." Shipbuilding was one of the "most vital forms of production for the successful prosecution of the war" and it was essential that "more and more

women should be employed on work of which they are capable." Miss Holmes, a Higher Technical Officer at the Ministry of Labour, had visited a variety of shipyards to see "what her sisters were doing."²⁷

Holmes discovered on her tour that there were 114 jobs that were within the "physical strength" of women employed in the yards. Her observations on welding, a trade that required a high degree of manual dexterity, are illuminating:

It is no exaggeration to say that the average woman takes to welding as readily as she takes to knitting, once she has overcome any initial nervousness due to sparks. The two occupations have much in common since



Photograph of Girl Welders. Merchant shipbuilding, girl welders at work. Photograph courtesy of the Imperial War Museum, London.



Photograph of Sadie Nairn. Miss Sadie Nairn is an expert welder here at work on a minesweeping trawler. Photograph courtesy of the Imperial War Museum, London.

they both require a small, fairly complex manipulative movement which is repeated many times, combined with a subconscious concentration at which women excel.²⁸

Aside from the overtly propagandist nature of *Women in Shipbuilding*, what underpinned much of Holmes's rationale was an attempt to portray women as no longer being shrinking violets (if they ever were), although the likelihood of any debutantes or duchesses working in the shipyards was extremely remote. Miss Holmes's view of the overwhelmingly working class women who did in

fact work in the yards is illustrated by her observations concerning two seaman's wives whose job was to lay steam pipes under a turbine. This necessitated "squeezing through narrow places thick with oil and standing in dirty water in the bilges." She comments:

Now the chivalry of men would like to spare women such work, but surely in these days such an attitude is mistaken. It has been a long journey from the crinoline to the boiler-suit and during that time women's clothes (which often symbolize their wearer's attitude

of mind) have changed so drastically, women seem in some respects to have become different beings, both mentally and physically. They no longer make a practice of swooning or having the vapours, and the "poor little me" pose seems to have disappeared for good.²⁹

Notwithstanding that shipyards were inherently dangerous working environments where fainting was likely to prove fatal, and that knitting was far less hazardous than welding, there remained manifest scope for further female dilution in shipbuilding. Such jobs that women were doing by mid-1943 were of an unskilled or semi-skilled nature, and were mostly confined to the shops and sheds away from the berths. However, the position yard-by-yard was hardly uniform. In the steel trades most electric arc welding was still done by men, although in riveting women were employed as catchers and rivet heaters. In the plater's shed they undertook the marking off of steel plates, and in most yards they were widely used as drillers and painters.³⁰ This was a significant advance, particularly on Clydeside where in July 1942 fifteen firms had no dilution, male or female, in the steel trades.³¹

Examples show the conservative attitudes of both unions and management to the increased employment of women based on the widespread perception that women would eventually threaten male jobs. An example from the northwest coast district of England is indicative of the major preoccupation of British shipbuilders in general, the retention at all costs of skilled male labor, and of one particular firm in particular, Cammell Laird at Birkenhead. In June 1942 a Ministry of Labour official referred to the high percentage of young male labor employed at Cammell Laird. He contrasted this with the observation that whilst the firm was obdurate in refusing to employ female labor, two thousand women were available for employment across the river Mersey at the Liverpool Labour Exchange alone.

According to his report of 19 March 1943 the official claimed that Cammell Laird had 750 platers and apprentices out of a total workforce of 8,717 workpeople, and contrasted this with Vickers Armstrong at Barrow, who employed 231 platers and apprentices from a total of 4,254 employed on similar work. As more men were called up, shipbuilding firms even bemoaned the loss of skilled operatives in white collar occupations. A good example of this comes from the records of the lower Clyde shipyard of Scotts' of Greenock, regarding two male costs clerks who were to be called up despite an appeal. A manager there lamented in February 1943:

It is difficult enough to function commercially at a continuous peak load, and with a depleted staff largely made up of more or less irresponsible women, without having two of our best and most experienced Clerks taken from us.³²

Management obduracy on labor matters was matched by conservatism in embracing new technology, and their general lack of enthusiasm was also demonstrated or matched by the trade unions. Moreover, such technological changes that did occur during the war were very much inspired by government inquiries into different aspects of shipbuilding, and committees resulting from them, and less so by reference to the multiple production techniques pioneered in the American shipbuilding program.

Any attempt to compare women workers in the British and American shipbuilding industries during World War II is fraught with difficulties. For the contiguous United States, bombing raids, rationing, blackout, and mass evacuations were not everyday occurrences. There were obvious transatlantic similarities of government, management, union leadership, and male workers in that female employment was viewed as temporary wartime expediency. Still, American shipbuilding firms in 1943 employed 100,000 women, five

times more than their British counterparts. The American figure is all the more impressive given that no women were employed in a productive capacity in American yards prior to 1942.³³ As a percentage of the total, employed women comprised only ten percent of the American shipbuilding labor force, an almost identical percentage to that employed in British shipyards. Female influence within American shipbuilding did not reflect their numbers, as only one woman made promotion to the previously recognized hierarchical position of forelady in the industry, although some women did become squad trainers.³⁴ Moreover, the racial and cultural background of women in shipbuilding in the U.S.A. was far more diversified than that of their British counterparts, and, in terms of work organization, American women, particularly in the specially laid out emergency yards, made far more use of machines and technology. In Britain females entered an industry that was still predominantly craft based and less capital intensive than its competitors, one where employers' attitudes were to a large extent preconditioned by the inter-war depression. Spatial limitations in existing yards, the lack of previous investment, and generally bad industrial relations precluded any widespread use of prefabrication techniques common to American shipbuilding.³⁵ Hirshfield has highlighted that American women's entry into shipbuilding was not entirely anomalous as this confirmed an "ongoing trend towards mass production and replacement of skilled labor with semi-skilled labor."³⁶ Although dilution of labor did take place in British shipbuilding, it was seen as a temporary phenomenon for the duration of the war only, and in the British context, there is a dearth of evidence to suggest that employers used women workers to de-skill the job.

The use of multiple production techniques in purpose-built American yards did encourage the use of semi- and unskilled labor, and from 1943 onward women's skills were particularly used for electric arc welding. This was in accord with the

U.S. Maritime Commission's belief in the division of labor, specifically, to get women up to speed in a particular craft. This was an issue in welding because it was "particularly wasteful in both time and material to train a welder in three positions when that welder will do nothing but tacking."³⁷ By 1943, with a fourfold increase in American shipbuilding yards from ten to forty, the Commission's attitude was at least understandable, both from the point of view of attracting sufficient labor against competing industries and from expediency. One similarity existed between Britain and America in that in the traditional shipyard tradeswomen were very poorly represented. For example, in three emergency shipyards owned by Henry Kaiser there were no women blacksmiths, and, of 3,300 shipwrights employed, only two were women.³⁸

Traditional craft unions in Britain were just as reluctant as their American counterparts in the boilermaking trade of riveting; women formed only one percent of the workforce occupied in the trade.³⁹ In the 1930s the employers had tried, and failed due to the solidarity of the Boilermakers Society, to make welding a semi-skilled rather than a skilled occupation in the shipyards. In British yards welding was primarily undertaken at the berths, a factor that meant that women were kept at arms length for most of the war, as the majority of females were employed in shops and sheds away from the hull. The Admiralty requested in June 1942 that employers put forward proposals to extend electric welding and offered to pay fifty percent toward the cost of suitable schemes.⁴⁰ As a result of this initiative, the Shipyard Development Committee, chaired by the Clyde shipbuilder Sir James Lithgow, reported in September 1943 that ninety percent of welding schemes were either complete or were nearly so.⁴¹ This coincided with the high point of female employment in the shipbuilding industry, although in welding there is again a dearth of evidence to suggest that employers used women to de-skill shipyard work. Government expenditure



Women on the prefabricated shipbuilding front. Woman cutting bottom plates for the start of a new ship. Prefabricated sections of hulls were completed at inland engineering factories and were partially successful in Britain's corvette construction program. Photograph courtesy of the Imperial War Museum, London.

on shipyards consolidated rather than challenged the status quo.

In assisting in the general development of British shipyards the Admiralty contributed far more than the fifty percent of costs originally envisaged in aiding firms principally involved in naval, but also in mercantile building.⁴² Indeed, the total value of these re-equipment schemes, including welding, was almost £7 million, of which the Admiralty's contribution amounted to £5 million.⁴³ Moreover, government largesse gave the federated firms of the SEF an advantage over their private competitors, as the latter firms, due to a shortage of skilled male labor and the success

of SEF firms in retaining them, tended to employ more women. A nonfederated private firm, Sir William Arrol's Kelliebank shipyard at Alloa in Scotland, anticipated that when in full production, they would have some two hundred female workers employed.⁴⁴ Arrol's was an emergency shipyard that specialized in all welded tank landing craft. By May 1943 the firm had sixty percent female dilution.⁴⁵

The shipbuilding and repairing industries did not exist in a vacuum. Employer and trade conservatism should be seen against a background where, in the fall of 1943, manpower requirements had reached such a level that they threat-

ened even more sacrifices from the civilian population than they had hitherto given. According to A. V. Judges, the Ministry of Labour's Manpower Survey in October 1943, with its suggestion of radical changes and further sacrifices to come in 1944, gave the government "something of a shock." Ernest Bevin's covering memorandum conveyed this situation with explicit numbers:

The services are requiring . . . 776,000 men and women. The Supply departments are asking for a net increase in munitions of 174,000, while the basic industries of the country (coal, agriculture, transport etc), are demanding an increase of 240,000. These demands cannot be met. Standards and amenities of the civilian population cannot be further reduced.⁴⁶



Photograph of Mary McCleod. Mary McCleod of the Outer Hebrides, who came down to Clydeside as a shipyard worker, on the deck of a destroyer, welding. Photograph courtesy of the Imperial War Museum, London.

Prime Minister Winston Churchill summarized the position in Cabinet by stating, “that it was no longer a problem of closing a gap between supply and requirements, manpower could not be more fully mobilized for the war effort than it actually was.”⁴⁷

How far this affected shipbuilding and repair is open to question. Peggy Inman, the official historian of the munitions industries, wrote that as such a large proportion of the industry was located in Scotland and in the northeast of England, areas where the absolute shortage of labor was negated, as they had more female labor than they needed. However, she did admit that later in the war serious shortages of labor occurred.⁴⁸ Therein lies a paradox. According to the noted shipbuilder, Sir Amos Ayre, from the beginning of 1940 only 23,000 workpeople were available to the mercantile side of the industry. Ayre recalled that at no time during the war was the labor force equal to the plant and berth capacity, and that the situation was more keenly felt on Clydeside than in any other district.⁴⁹ Naval building and repair took priority, but the government-controlled Royal Dockyards were only able to handle just over one third of all naval repairs, conversions, and refits. The three largest dockyards, Chatham, Devonport, and Portsmouth, in all built three cruisers and fourteen submarines in the course of the war, against a total in World War I of six battleships, fourteen cruisers, and twenty-nine submarines.⁵⁰ This comparison should be viewed against the increasing complexity of ships, more vulnerable locations to enemy aircraft, blackout, shortages of materials, and that the bulk of labor was utilized on repairs and conversions. Although the Royal Dockyards employed more women, it is far from clear how many were employed in production, but if we take Rosyth in Scotland as being representative, the figure was somewhere in the region of fifty-five percent.⁵¹

Taking this into consideration, it is certainly the case that the private shipbuilders and repairers in SEF firms could have employed far more

women than they in fact did. However, given the overarching importance of the preservation of skilled male labor to the employers, set against the exigencies of war, then the private firms were particularly efficient in retaining their skilled manpower throughout the war.⁵² Despite labor shortages, Clydeside employers had by mid-1944 began to reassert their pre-war right to hire and fire at will. A report by Mackie, a Ministry of Labour official, noted that a great deal of the older boilermakers taken on during the war were “now being thrown on the street.” Given this, he believed that “we the Ministry of Labour at least are satisfied that the war is not yet over and we have more responsibilities than a mere outlook for profit, and post war.” He further noted that the employers seemed to be making a concerted drive to rid themselves of the conditions imposed upon them by the Essential Work (Shipbuilding and Repair) Order, 1942, in order to return to “the old starvation method of applying discipline.” Mackie concluded his report by highlighting what was in his view the perennial problem in shipbuilding and repair by slating the employers’ attitudes to it. He stated:

Few or any of them seem to realise that just as their power to discipline depended on the surplus of labour market so soon did they lose that power when there were more jobs than workmen.⁵³

Before further assessing women’s contribution in the private shipyards during the war, it is incumbent to point out that had there been more standardization and consequent subdivision of work, more female dilution in the industry would probably have taken place. Yet it was precisely labor, and in particular the squad system of organization rather than capital intensive methods, which had kept British shipbuilding competitive in the past. One result of the modernization program of shipyard plant and equipment that did take place was, perversely, that it proba-

bly held back further female dilution rather than encouraged it. Other pertinent factors were interchangeability of craftsmen in ship repair, the extension of a payment by results system of work measurement in 1943, and the fact that the private naval yards were better equipped than their mercantile competitors. However, spatial considerations in British yards negated any widespread move toward prefabrication on the American scale. Nevertheless, a comparative study of six American shipyards during the war, although it was unknown just how representative they in fact were, yielded some interesting results. In the case of destroyers, submarines, and prefabricated frigates, building times in American yards were quicker. However, British yards used far less labor and were more productive in terms of output per man/tons per year on all three types of vessels.⁵⁴

As the war progressed, potential disputes were more likely to occur when women reached the position of skilled dilutees as the question of equal treatment to men over allowances and bonuses would inevitably arise. By January 1944 this was significant to the SEF as on the Clyde and the Tyne, women dilutees in the steel trades were predominantly engaged in welding, with Tyne and Clyde firms employing 251 and 222 female welders respectively. These numbers dwarfed those of other districts such as Wearside and other northeast coast yards where only forty-six and twenty women were respectively employed.⁵⁵ The wide disparity in numbers employed by district is explicable as many areas were dominated by ship repair firms who on the whole employed even fewer women than their shipbuilding brethren, and generally dragged their heels on female dilution. This was on the whole true of the trade unions, which held the upper hand for most of the war; it remains unclear how far their attitudes hardened as the end of the war neared.⁵⁶ Union insistence that welding—certainly the single most important development in merchant shipbuilding during the war—should be a skilled occupation more

than anything else preserved their craft privileges in the post war era. For a large part of the war, shipbuilding employers were constantly urged by the Admiralty to extend welding, and by 1944 this was considered to be a "necessity."⁵⁷

That the numbers of women employed in a productive capacity in shipbuilding was small is beyond doubt. Of the thirteen thousand women employed at the peak of activity in 1943, only twenty-three percent, some three thousand, were employed in skilled categories, and women who worked part time were counted on a 2:1 ratio in official statistics.⁵⁸ Females employed in three productive classes—French polishing, Upholstery, and Tack Welding—formed only a tiny minority of the postwar total of women employed in the industry. In the case of female French polishers, it was not until January 1968 that they finally attained the fully skilled adult male rate for the job.⁵⁹ How distinct then was the contribution of female workers in British shipbuilding and repair during World War II? One must conclude that their presence was certainly anomalous, and to a large extent union and management collusion and intransigence played a part. However, the government, in allowing the shipbuilders to put their own house in order and to keep their work practices more or less sacrosanct also played a significant part. The eventual Allied victory was the paramount consideration of government and people, and in this, shipbuilding and repair played a significant part. There was never any real sense of a combination of women and technological change presenting a potent threat to the overwhelmingly male shipbuilding and repairing workforces. Women in welding proved, if anything, that the employers were right in the mid-1930s that it should be a semi-skilled occupation, and only the strength and solidarity of the Boilermakers Society had prevented this from becoming a reality. Had there not been an element of government compulsion to increase the female workforce, even fewer women would have contributed to the war effort.

in private shipbuilding and repair. In an industry so firmly welded to the past of trade demarcations

and management conservatism, women were always likely to come off second best.

≈ NOTES ≈

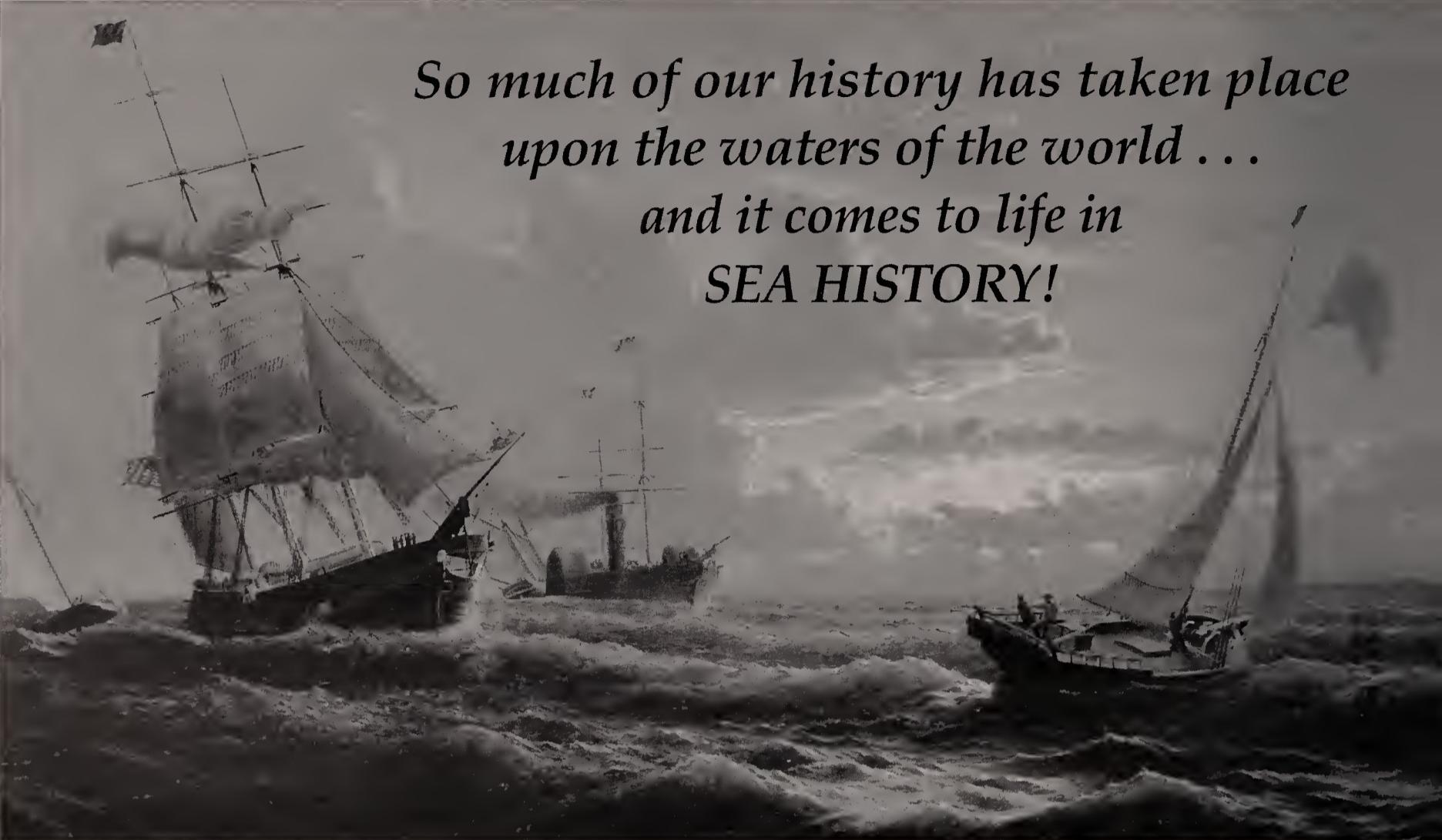
1. **Author's note:** This article is not an attempt at synthesis in what is a complex debate on the role of women in war in general and in society in particular. Neither is it an attempt to consider the enormous volume of gender related literature on the subject of female participation in society or in industry generally. It is rather a holistic look at a topic where primary source material remains difficult to find, a situation that is further compounded by a paucity of references in the contemporary journals to women's role in war shipbuilding and repair.
2. The records of the SEF are held in the Shipbuilders and Repairers National Association Papers at the National Maritime Museum, Greenwich, England, and are hereafter referred to as NMM, SEF. The SEF was formed in 1899, and membership was only open to private firms who built or repaired ships of one hundred gross tons and over. This excluded boat-building yards where, by May 1941, women had an "important place," *Shipbuilding and Shipping Record*, 8 May 1941, 434, and the Royal Dockyards which were Government controlled. Government source material referred to in the text is held at the Public Record Office, Kew, England. These records are hereafter referred to as PRO Cab, or PRO Lab.
3. *Restoration of Pre-War Trade Practices Act*, 1942, Geo. 5 & 6. Chapter 9.
4. *Shipbuilding and Shipping Record*, 25 July 1940, 86.
5. PRO Cab 102/407, *Labour Requirements and Supply: Shipbuilding and Engineering, 1935–1945*, 199. Peggy Inman used this master copy in draft for her official history *Labour in the Munitions Industries*, HMSO 1957.
6. Ibid., 200.
7. Penny Summerfield, *Women Workers in the Second World War: Production and Patriarchy in Conflict* (London, Routledge: 1984), 151.
8. Figure extrapolated from table on shipbuilding in Peter Howlett, *Fighting with Figures: A Statistical Digest of the War*, HMSO 1951.
9. *Build the Ships: The Official Story of the Shipyards in Wartime*, HMSO 1947, 63. United States Naval Secretary Colonel Knox announced that by Thanksgiving Day 1943 America had built tonnage in excess of that sunk in the war.
10. Howlett, *Fighting with Figures*, 181.
11. NMM, SEF 8/S8, Statistics "B."
12. PRO Cab 102/407, *Labour Requirements and Supply*, 198.
13. PRO Cab 102/379, *Industrial Relations in Admiralty Establishments and Contractors Works*, unpagedinated draft.
14. NMM, SEF 1/3044, *Agreement: SEF and Confederation of Shipbuilding and Engineering Unions*.
15. PRO Cab 102/434, *Allocation of Manpower*, First Draft by A.V. Judges, May 1948, 26.
16. *Shipbuilding and Shipping Record*, 13 March 1941.
17. PRO Cab 103/410, November 1944 to December 1956, Inman, Master Copy, 199.
18. Ibid., 203.
19. PRO Lab 10/363, DCIC Scotland, Weekly Report, 20 June 1942.
20. PRO Lab 10/138, Report of a Court of Inquiry, letter to I.R.D. 18 March 1941.
21. NMM SEF 1/40 Report of AGM of SEF, 13 November 1952.
22. Ibid., the figure of women employed in shipbuilding on 3 June 1942 was approximately 3,400. Female employment in shipbuilding and repair stood

- at 2,900 in 1939 and peaked at 21,900 in mid-1945, Ministry of Labour *Gazette*, 1945, Table on Employment and Industry, Shipbuilding and Ship Repairing.
23. PRO Lab 8/662, *Efforts to Secure the More Efficient Use of Labour in the Clydeside Area and in the Shipbuilding Industry*. Shipyard Labour Supply, East of Scotland, 15 August 1942.
 24. Ibid.
 25. PRO ADM 1/11892, *Labour in Naval and Mercantile Shipyards* (Barlow Report), July 1942; PRO BT 28/319 *Report to the Machine Tool Controller on the Equipment of Shipyards and Marine Engineering Shops* (Bentham Report), September 1942.
 26. NMM SEF 1/3173E, Circular Letter 108/43, and Booklet.
 27. Ibid., Letter accompanying booklet on *Women in Shipbuilding*, dated 4 June 1943.
 28. Ibid., *Women in Shipbuilding*, 2.
 29. Ibid., 10.
 30. Ibid., *List of Women's Work in the Shops and Sheds*, 7 & 8.
 31. PRO Cab 102/407, *Labour Requirements and Supply*, 195.
 32. Glasgow University Business Archives Centre, GD 319/12/1/8.
 33. Deborah A. Hirshfield, *Rosie Also Welded: Women and Technology in Shipbuilding During World War II* (Ann Arbor: University of Michigan Press, 1987), 6.
 34. Frederic C. Lane, *Ships for Victory: Shipbuilding Under the US Maritime Commission in World War II* (Baltimore: Johns Hopkins University Press, 1951), 257.
 35. Prefabricated sections were constructed in inland factories and then taken to shipyards. This method of work organization was particularly useful for Britain's Corvette and Tank Landing Craft programs.
 36. Hirshfield, *Rosie Also Welded*, 2.
 37. Ibid., 110.
 38. Amy Kesselman, *Fleeting Opportunities: Women Shipyard Workers in Portland and Vancouver during World War II and Reconversion* (Albany: State University of New York Press, 1994).
 39. James Mortimer, *History of the Boilermakers Society, 1940–1989* (London: Verso, 1989), 3:17–18.
 40. PRO Cab 102/442, Draft copy of C. M. Kohan's *Merchant Shipbuilding and Repair*, 34.
 41. Ibid.
 42. PRO Cab 102/281, *Shipbuilding and Admiralty Production, Factories and Plant*, William Hornby, 36–37.
 43. Ibid.
 44. PRO Lab 8/662, *More Efficient Use of Labour*, Memo from J. McMillen, Shipyard Labour Supply Office, 15 August 1942.
 45. Ibid., Memo by V. Holmes to Mr. Jenkins, Reporting Officer Scotland, 24 May 1943.
 46. PRO Cab 102/434, *Allocation of Manpower*, 86.
 47. Ibid.
 48. PRO Cab 102/407, *Labour Requirements and Supply*, 183.
 49. Transactions of the Institute of Naval Architects, Paper by Sir Amos Ayre, Vice President of the Shipbuilding Conference, 17 April 1945.
 50. PRO Cab 102/281, *Shipbuilding and Admiralty Production*, 52–53.
 51. PRO Lab 8/662, *More Efficient Use of Labour*, Shipyard Labour Supply, East of Scotland, 15 August 1942.
 52. PRO Cab 102/407, *Labour Requirements and Supply*, Inman highlights that there was virtually no change in the course of the war in the proportion of labor recognized as skilled in shipbuilding. After a slight drop from fifty percent in 1940 to forty-seven percent in 1942/43, it rose again to forty-eight percent at the end of the war.
 53. PRO Lab 8/662, *More Efficient Use of Labour*, Report for August 1944 from Mr. Mackie to Reporting Officer Scotland.
 54. PRO Cab 102/529, *Shipyards and other Shipbuilding Capacity*, Miss D. McKenna, unpublished narrative. Productivity comparisons are notoriously difficult to make, given differences in plant, machinery, and equipment, particularly cranes. This comparison is illustrative only, and should not be taken to be definitive.

55. PRO Lab 8/662, *More Efficient Use of Labour*, SEF Table on Employment of Women under Dilution Agreements, January 1944.
56. NMM, SEF 4/101, as late as March 1945, Boilermakers at Swan Hunter and Wigham Richardson at Wallsend on the Tyne were still trying to obtain from their employers equal pay for female welders over twenty-one years old who had completed their probationary period.
57. Ibid., Circular Letters 54/44 and 59/44, *Employment of Women in Shipbuilding and Repair and Extension of Welding*, 16–17 March 1944.
58. PRO Cab 102/407, *Labour Requirements and Supply*, 1948.
59. NMM, SEF 1/3173, *The Extended Employment of Women in Shipbuilding, 1952–1967*, Circular Letter 116/67.

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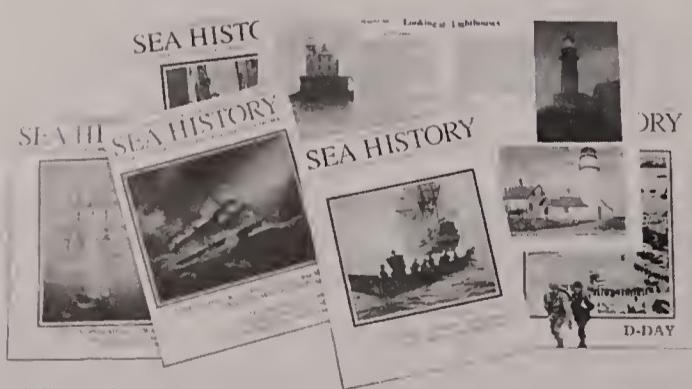


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THE *MEDEA* FLOATS AGAIN: STEEL HULL PRESERVATION USING FOAM CORE AND FRP

by J. S. Dean

The best maritime history is not found in blue-bound volumes on library shelves of naval academies, nor in builders' half models in maritime museum display cases, nor even in dry-docks. Drydocks do allow you to see what is below the waterline or Plimsoll line. The *Cutty Sark* in Greenwich, the *Victory* in Portsmouth, or the *Great Britain* in Bristol are invaluable assets, but useful as these displays are, these ships will never again feel water slipping past their hulls, nor can we feel their bows rise to the ocean's swell as they head out to sea. Ships are studies in time and motion. This is their essence. Fortunately, some maritime history is still found afloat. There are Mystic Seaport's whaler *Charles Morgan*, Toronto's decorated World War II destroyer *Haida*, Boston's frigate *Constitution*, and San

Diego's 133-foot steam yacht *Medea*, to name just four. The *Medea*, built in the summer of 1904, was not designed for whaling or war, but for the fleeting autumn deer and grouse hunting season on Scotland's western isles of Mull, Jura, and Islay, islands famous to single malt scotch whisky lovers. These latter two vessels make the case for preserving maritime history as vessels that can still steam or sail. Restoration of such old vessels to original specifications can be expensive. However, a new technique for preserving them can cut the costs to roughly one fourth what they would otherwise be.

Take the *Medea* as an example. Now nearly one hundred years old, about ten years ago she needed major work if she were to continue as a piece of steaming maritime history, but to repair the heavily rusted hull of a riveted steel plated yacht to original specifications would have been a costly job. Replacing plates is expensive. Could modern technology be used to restore the hull more cheaply and still meet or exceed U.S. Coast Guard inspection requirements? This was the problem facing the San Diego Maritime Museum. In 1986 the Coast Guard noted that repairs would soon be needed, and 1988 it withdrew the certificate of the then eighty-four-year-old S/Y *Medea*, the world's oldest steam yacht still afloat and operating.

J. S. Dean is a Research Fellow at the University of East Anglia and the University of Exeter, where he is researching a book on sixteenth-century maritime history. He was formerly director of International Studies at the University of Wisconsin-Parkside. He has written on the construction of John Cabot's ship, the *Matthew*, has published a book on sailing square-rigged ships, and is sailing master aboard barquentines.

The *Medea* was first launched on 29 August 1904 in Linthouse, on Clyde, Scotland, by Alexander Stephen and Sons for Captain MacAllister Hall's sport and pleasure. Her construction was excellent, especially so considering she was built in only fifty-one days, a record rivaling that of the Liberty ships of World War II. Since then she has been owned by members of the British Parliament, has served in both World Wars, including seeing service under several national flags. Her length is 133.5 feet from bowsprit to taffrail, 118 feet on deck, 104 feet on waterline. Her beam is 16.5 feet, her mean draft six feet forward and eight feet aft, and her dead weight eighty-five short tons, displacement 145 tons, her gross tonnage 111.84 tons, her compound engine, 256 h.p. (for a speed of 11.5 knots), a 100 psi Scotch boiler, and a three kilowatt generator. In 1904 all this was advanced technology.

Since her launching for the 1904 hunting season, the *Medea* has seen service in World War I from 1917–1919 as a submarine chaser for the French Navy, in World War II from 1941–1945 as a barrage balloon ship for the British Royal Navy, and as a barracks ship for Norwegian commandos. More lately she has worked as a charter vessel under the Danish flag. In 1964 she was converted from coal to oil. She was shipped from Scandinavia as deck cargo to America in 1971, and since 1973 has had a berth at the San Diego Maritime Museum. There she cruised the waters of the bay a couple of days a month, until 1988, when the United States Coast Guard took away her certification because of needed repairs. Turn now to her original construction.

By the late 1800s thin plated riveted steel, because of its strength, stiffness, and tolerance to damage, was the latest stuff in shipbuilding. The *Medea* was built of quarter-inch (6.4 mm) mild steel shell plate on twenty-inch (500 mm) spaced transverse frames. Over the years, to meet the regulations of various authorities, plates had been

renewed, over two dozen doublers (additional plates welded over the original ones) had been added, and she had been blasted and painted numerous times. By the 1980s her hull, some of her scantlings, a few frames, longitudinals, and bulkheads had deteriorated seriously. The hull was the main concern. To repair her by the original means was too expensive. Was there an alternative? Could foam sheets be bonded to the thin hull, which was seriously rusted in places, then covered by fiberglass, so that the *Medea* could steam again? Could the work be completed in a reasonable time? Would the new skin stick? Would the yacht still retain her original sweet lines? For as then museum director (also marine surveyor and retired U.S. Coast Guard captain) Ken Franke said, "we want everyone to know that she's a 1904 steam yacht. It's the sort of thing historians and the public want to see." Then there was the final question, would the repair last?

The original bids for rebuilding just the hull "as original" had run \$1.2 million to \$1.3 million, and the entire job would have cost up to \$2 million—far too much for the museum's small strongbox. The new method was attractive. The noted naval architect and museum president Arthur DeFever tried out the foam/FRP (fiber-reinforced plastic) technique on some of the actual plate removed from the *Medea*. When bending and stress tests proved successful, the museum requested new bids for this innovative repair. These bids came back well under the original bids, only \$250,000. As interested and supportive as the Coast Guard was, it twice rejected this plan, citing regulations stipulating that steel hulls had to be repaired "as original."

The USCG further maintained that the foam/FRP was too thin to give enough hull shear strength and that there would be inadequate bonding between the plastic and the steel. On appeal and after various proofs, the Marine Safety Center in Washington, D.C. gave approval, provided that the repairs satisfied three conditions:

1. That an acceptable way be found to replace or strengthen the wasted internal structural members,
2. that the midship section modules of the hull with the foam/FRP repair be at least as strong as an all-steel hull, and
3. that there be sufficient overlap at the joints of the FRP and the steel attachments.

The San Diego shipyard of Knight & Carver took on the repair job. It met conditions one and three by having Ray Dobson Welding weld new flatbar to existing members. Because the foam/FRP-clad hull would stiffen and strengthen the hull significantly, welding would be needed in only key locations. It met condition two by proving through tests that the foam and FRP skin was two and a half times as stiff as the original steel plating. At last the Coast Guard gave final approval for the repairs to begin. Since this was to be the first time a foam core would be bonded to a steel hull, the authorities insisted on a step-by-step inspection of the process.

For about four years the noted naval architect and museum president Arthur DeFever navigated the project through technical and bureaucratic problems. "There were lots of pooh-poohs and noes about the process before we started," he observed. But once underway, the work went fast. The entire job, from out of the water to back in took from March 8 to July 17, 1990. Within that time the foam/FRP part took about seven weeks.

A 162-ton capacity floating crane hauled the *Medea* onto San Diego's 10th Street pier. Conventional keel blocks (some fourteen or fifteen 12" x 12" x 4' timbers with removable wedges allowed for the blocks to be moved so that all areas could be fiberglassed. Instead of bilge blocks, four six inch pipe brasses, two on each side, were fitted from the ground to under the main deck guard and welded to the hull. To secure this arrangement the crew welded flatplate from the bottoms of the pipe brasses on one side to those on the other. Some four moveable jack-

stands on each side took the rest of the load. The entire underwater part of the hull could thus be clear of any supports. The crew then cut twenty thousand pounds of ballast out of the hull to get at the badly rusted bilges. New plates were welded in place.

Repairs were of two sorts, those to structural members and those to the hull from eight inches above the load waterline (both internally and externally) down to the keel. Knight & Carver contracted R. W. Little, Co. to sandblast the hull to white metal, using a coarse sand grit blast, penetrating in some areas through the shell plating. When blasted to white metal, the *Medea*'s bottom was like a thin slice of Swiss cheese. Tests showed that after the blasting the hull still had its basic strength and—equally important—its original shape. That shape would serve as the form, as an inner skin and mold for the new sandwiched foam/FRP outer hull. To keep the white metal from oxidizing after the sandblasting, the hull was immediately coated with a vinyl ester resin.

The depression pits made by the sandblasting, the protrusions and hollows of the rivets, and the butts of the overlapped plates were then filled with a vinyl ester resin and faired. Next, what bonding agent to use? The choice was between an epoxy and a vinyl ester adhesive. The gel bonding agent needed to have a short drying time, not harden, and have a coefficient of expansion similar to that of steel. Epoxy gel, although it takes only overnight to dry, hardens and crazes over time. Vinyl ester cures in about twenty minutes, stays supple, does not craze, and has a coefficient of expansion similar to that of steel. The vinyl ester resin adheres better than epoxy with this particular foam. It is also lighter than epoxy and equal in cost. Vinyl ester met the needs. Dow Chemical donated its Derakane 8086 adhesive for the job. The crew applied a thick coating of this vinyl ester resin. This substance has a high adhesive strength and good resistance to abrasion and

severe mechanical stress. In all, some eleven thousand pounds of resin went onto the hull.

Immediately after the Derakane was applied, sheets of half inch Airex R62.80 foam (roughly 6' x 8') were bonded to the hull by forcing them into the resin and against the plating by using vacuum bags. DeFever chose Airex R62.80, a rigid, non-friable, closed cell inorganic foam, and well known to boat builders for its ability to withstanding shock (it can be compressed to fifty percent of its thickness without rupture or crumbling of its cell walls and still recover its original shape), according to Torin, Inc., the United States distributor of the Swiss product, Airex. There are two types of rigid foam currently used in the marine industry for sandwich cores. The first are the cross linked PVCs. They are strong but brittle. The second are the Airex foams. They are not cross linked; hence they are both rigid and elastic. According to Torin's Thomas J. Johannsen, "Airex bonds well to 8084 Dow resin. . . . Sticks to it like the dickens. . . . And it's the only foam that behaves in that manner." It has the ability to retain bond integrity between hull laminates, it has the long term characteristic of staying elastic and not crumbling, and especially important in the case of the *Medea*, Airex is strong—twice the strength of steel at about half the weight. "Local impact resistance is excellent. Airex is good for that," noted Brent Gordon, manager of Knight & Carver. Thomas Johannsen at Torin pointed out that "you can ram into piers and pilings, and it will protect the hull underneath."

The vacuum bag method kept the core pressed against the hull until the adhesive was dry. "Vacuum bagging did it," said Franke. "It pushed so that there was a ten percent compression into the Airex. . . . Kind of like the Jolly Green Giant taking it in his hands and squeezing the Airex into the resin." In early summer San Diego's temperature is about seventy to seventy-five degrees Fahrenheit, so that the vacuum bag needed to be kept on for forty to forty-five minutes. Because the Airex conformed to the hull's

contour so well, little fairing was needed. Where there were through-hull fittings or other protrusions the core was tapered and solid FRP layers were applied around them.

Besides the hull, the keel also got the solid stuff. In order to withstand the loading when dry-docking, the process for the keel called for six layers of solid FRP layup, totaling 9/16" in thickness.

Fiberglassing the hull's Airex core was the next step. Three separate rovings, each .09" thick, were applied. The new skin was a minimum of 7/8" thick. Once the fiberglass had cured, the crew then filled, faired, and fine sanded the hull and keel, using broadboards and hand sanding. Said Franke, "She's so fair now that she looks like an old schooner below water." Two coats of Proline's epoxy primer, and then the finish coats of anti-fouling paint completed the work on the outside of the *Medea*.

The hull's interior was the other part of the job. A crew first sandblasted the heavily rusted bilge, sides, and framing to white metal. The needle gun stripping produced over five thousand pounds of rust and scale. The frames, floors, gussets, and stringers that were wasted were cropped out and new metal was added. To increase the panel strength at the cutwater, two interframes were added in the forward shoulder. Once the hot work was done, this area was painted first with four coats of epoxy primer, then a final coat of polyurethane high gloss white paint. How much paint went on? In all, five hundred pounds of it. Yet when the *Medea* was launched, said Franke, "she went back close to her original 1904 marks of six feet forward, eight feet aft."

In looking back on the job, everyone from the architect to the yard that did the work was pleased with the results. Knight & Carver believes this process is better than replating, not just because it costs less, but because of Airex's ability to insulate the hull and to prevent corrosion. The Coast Guard declared the hull sound, and once new boilers were installed, the *Medea* regained her certification. "Yes, we'd do it again," said

Brent Gordon, manager of the paint, fiberglass and fairing departments of Knight & Carver. "Everything went according to plan. The job took a total of about six or seven weeks. We had about fifteen or sixteen men on the job . . . it went pretty quickly. The boat now is a stronger structure than originally." A year or so after the relaunching of the *Medea* the operation was deemed a success. "We're watching the upper adhesion joint closely, but haven't seen it delaminate," said Franke in 1992. Was this new repair technique successful? Said Franke, "she's been afloat since July, 1990, and looks super." Said DeFever, whose matter-of-fact manner also carries along a bow wave of pride, "I have no qualms about it at all. I've checked the hull thoroughly since it went into the water. There is no delamination. . . . I'm very happy with it."

Now some nine years later, according to the current museum director, Raymond Ashley, the *Medea* is as sound as ever. Since Ashley joined the museum in 1995 he has made some seventy sailings on the *Medea*, including two jaunts out to sea. He has supervised two of her drydockings and the 1997 boiler restoration since then. "From a conservation standpoint, any process which preserves the original material, its shape, use, and functionality, is worthy of serious consideration. The only principle violated by the techniques we employed is the principle of reversibility, and that

may not have been possible [to avoid], given the decision to continue using *Medea* as an operational ship and [given] available materials and technique. There is little or no evidence of delamination in the applied material. In retrospect, it might have been wise to extend the application the entire span of the topsides as well, but this is certainly an option that could be exercised at a later date." According to Diane Cooper, current curator of collections at the museum, the ship has fared well. There have been no discernible problems, and the *Medea* still steams out into the bay twice a month.

The San Diego Maritime Museum is studying ways to preserve yet another ship, its 209-foot ferry boat, *Berkeley*. Launched in 1945, acquired (like the *Medea*) in 1973, she serves as the museum building. In 1990 workers chipping the bilges discovered that her hull plating was dangerously thin, her steel hull punky and rotten. The museum staff are now considering using a similar technique to that used for the *Medea* to keep the *Berkeley* afloat.

Historic steel vessels of the nineteenth and twentieth centuries inevitably need hull restoration. This new technique, far less costly, less time consuming, and better structurally than traditional methods of repair, can allow living maritime history to stay afloat.

NOTES

This article reflects approximately nine years of consultation with officials at the San Diego Maritime Museum, California, and others elsewhere who worked on the project to preserve the *Medea*. During this period at the museum these include Captain Kenneth Franke and Raymond Ashley (since 1995), directors, Arthur DeFever, president and noted naval

architect, Craig Arnold and (presently) Charles Bencik, librarians, and Robert Crawford, chief engineer, S/Y *Medea*, and project manager. The museum kindly supplied me with papers, articles, photographs, and architects' drawings.

I spoke to engineers at Dow Chemical, U.S.A. about its vinyl ester resin adhesive, Derakane 8084;

Thomas J. Johannsen at Torin, Inc., distributors for Airex, A. G., Switzerland, for its Airex foam; and Brent Gordon, manager at the custom yacht building and boat repair firm of Knight and Carver, Inc., San Diego, California.

Additionally, I have made use of various papers and publications on this new technique: "86 Year Old Steel Yacht *Medea* Restored with an Airex Composite Skin," *Torinews*, May 1991, 1 page; "Derakane Resin Used to Save Historic Ship," *Derakane News*, Dow Chemical U.S.A., Volume 10, Issue 1, July 1991, 2 pages; Albert W. Horsmon Jr., "Permanent Composite Cladding of Deteriorating Steel Hulls," paper delivered at National Shipbuilding Research Program 1991 Ship Production Symposium, San Diego, 3-9 September 1991, 8 pages; "Foam-Cored Composite Preserves Historic Ship," *Torinews*, November 1991, 2 pages; Arthur DeFever, N. A., "Restoration of the Riveted Steel Hull of the Steam Yacht *Medea*" (manuscript, San Diego Maritime Museum Library, no date, 1992?, 6 pages); David

Kolthoff, High Technology Solutions, Inc., "Reviving the Ship: Engineering Challenges in Restoring Historic Ships at the San Diego Maritime Museum," illustrations to a talk delivered at the Combined Meeting of the Society of Naval Architects and Marine Engineers, American Society of Naval Engineers, and the Propeller Club, 10 December 1996, 16 pages.

Two further sources should also be cited: an article written prior to the preservation, Howard Serig Jr., "*Medea*," *Nautical Quarterly*, Autumn, 1988, 36-43; and a fine narrative work that gives in discursive detail the history of the *Medea*, from her construction in 1904 to just before preservation, the book by Craig Arnold, "*Medea*": *The Classic Steam Yacht*, San Diego, California: Maritime Museum Association of San Diego, 1994, 228 pages.

Ian Gordon, President of Giract, Ltd., Geneva, Switzerland, graciously provided helpful editorial comments and suggestions.

~~ ILLUSTRATIONS ~~

Opposite page.

Top: S/Y *Medea* (1904), 133'6" LOA. Original drawing, "Alex Stephen & Sons, Ltd., Shipbuilders, Glasgow," dated 10 June 1904. Between 1830 and 1930 many such ships with similar sweet lines were built, but few have survived. Courtesy of the San Diego Maritime Museum.

Bottom Left: Drawing of typical hull construction and repair. Courtesy of the San Diego Maritime Museum.

Bottom Right: Rust inside hull of *Medea*. Some five thousand pounds of rust and scale were taken from the inside of the ship. Courtesy of the San Diego Maritime Museum.

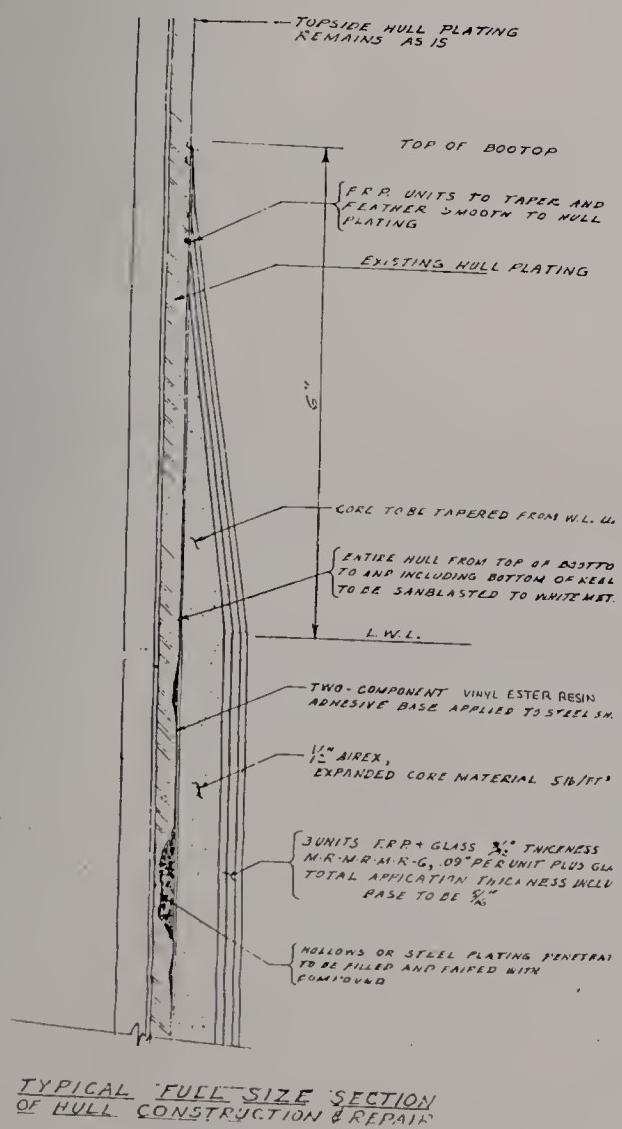
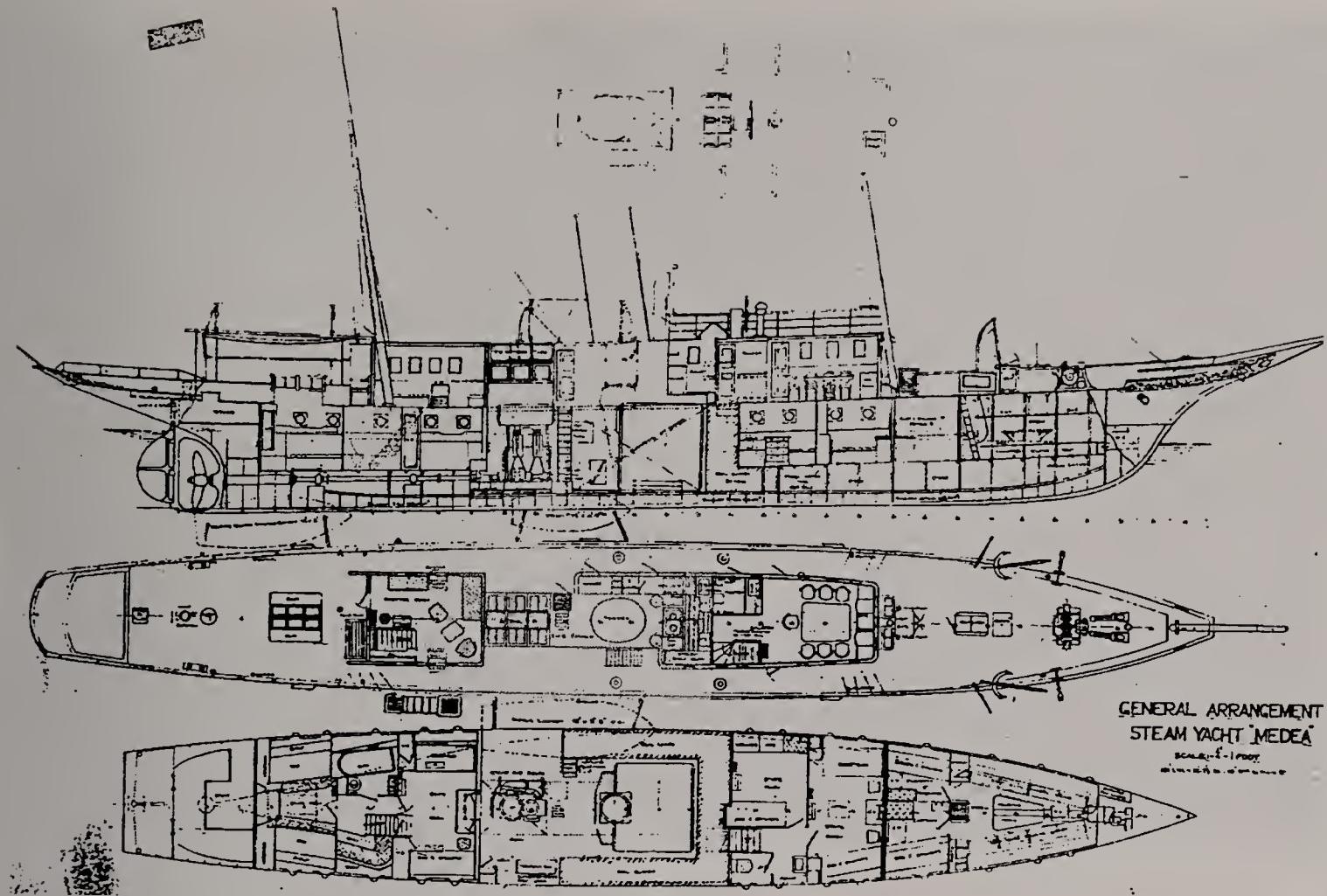


Illustration by Arthur DeFever, N.A.



Above: Rust inside hull of *Medea*. Courtesy of the San Diego Maritime Museum. Below: *Medea* on dock, showing her thin steel riveted hull, large screw, and semi-balanced rudder. Courtesy of the San Diego Maritime Museum.





Above and left: Once the underwater portion of the hull was blasted to white metal, the hull was coated with vinyl ester resin. Airex closed-cell foam sheets were then vacuum bagged in place. Pumps sucked out the air to create pressure on the Airex sheets and to make the bond with the hull. Courtesy of the San Diego Maritime Museum.



Crew prepares hull for Airex sheets, to be followed by three layers of fiberglass roving and mat. Courtesy of the San Diego Maritime Museum.

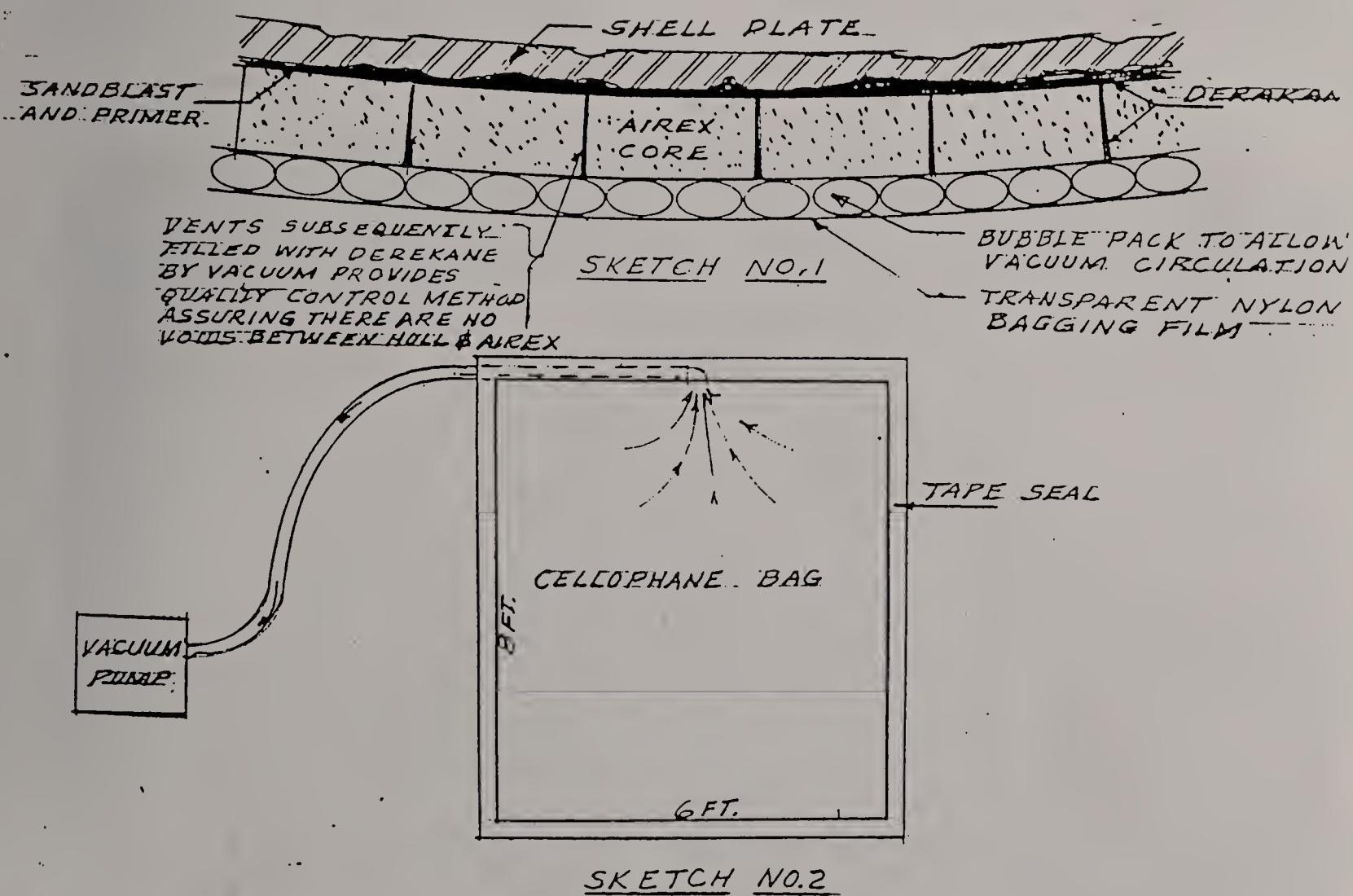


Above: The *Medea*, repairs completed. Ready to be launched. Courtesy of the San Diego Maritime Museum.
Below and above right: The *Medea* sails in San Diego Bay. Courtesy of H. Blair Burkhardt, Wilderness Photography, San Diego.

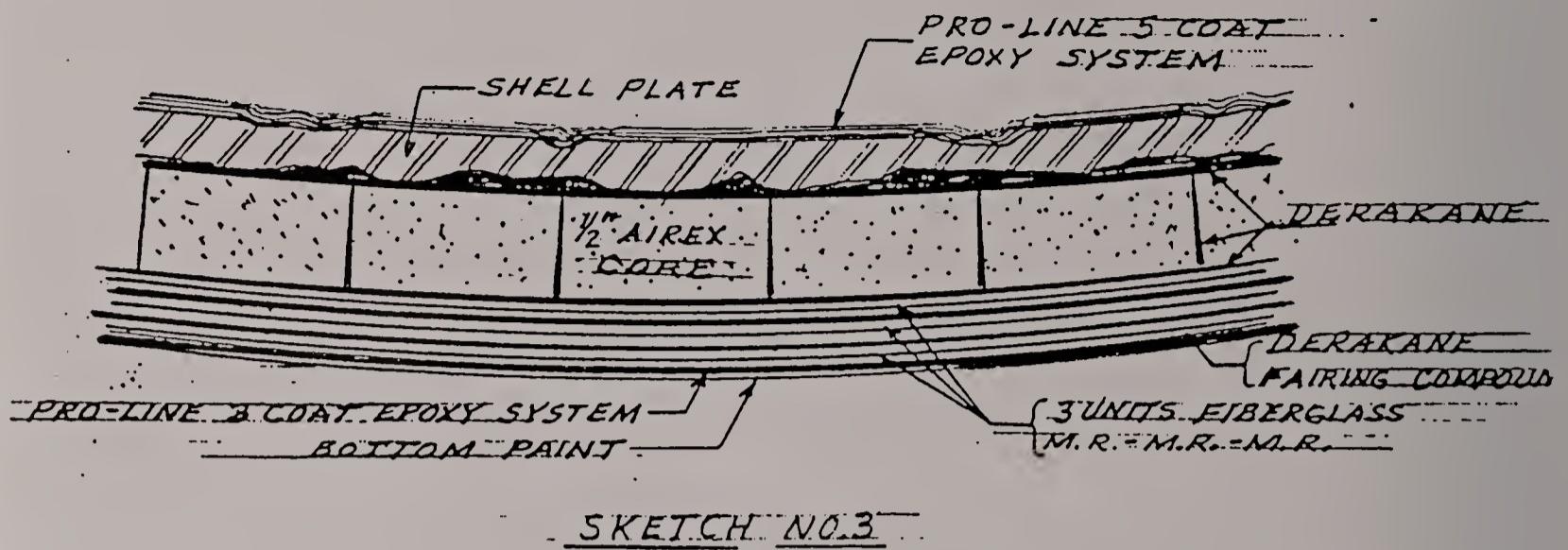




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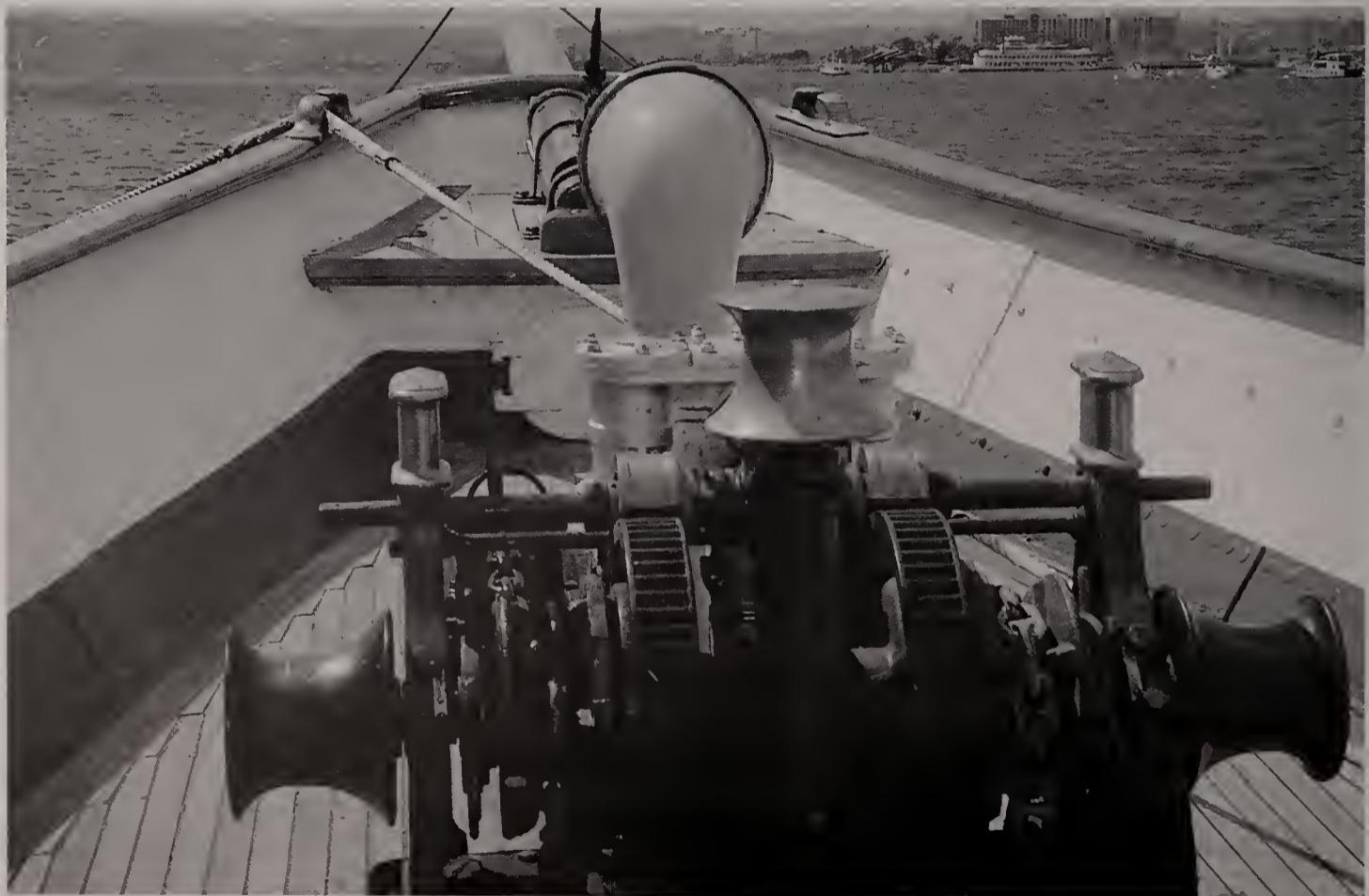


Airex core and vacuum-bagging technique. Courtesy of Arthur DeFever, Naval Architect, San Diego.

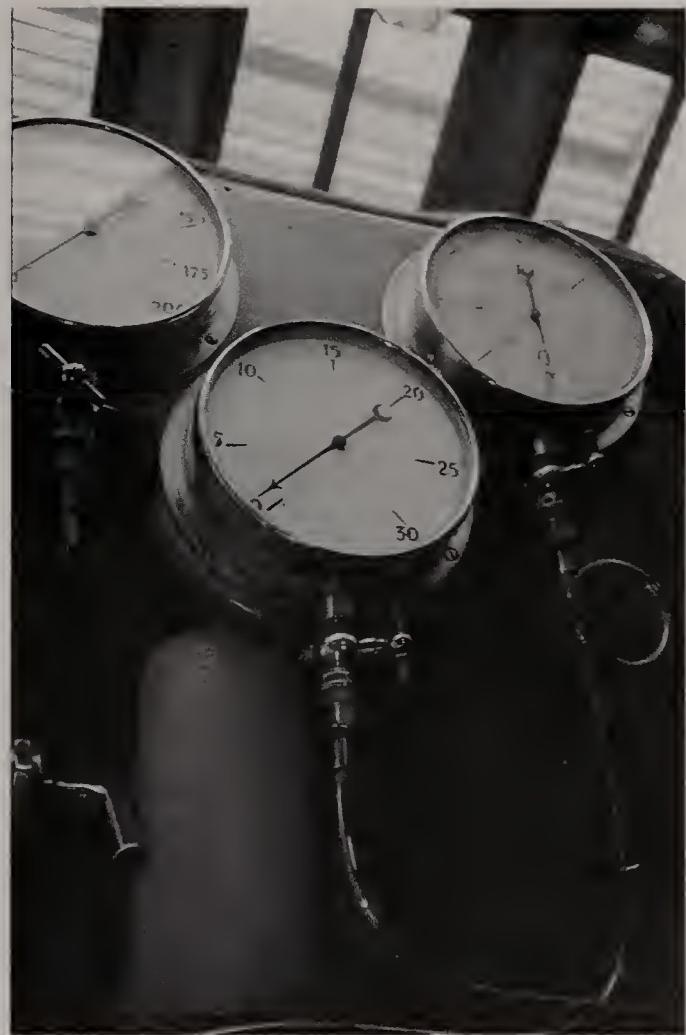


Sketches No. 1, 2, 3 By Arthur DeFever, N.A., "Restoration of The Riveted Steel Hull of the Steam Yacht Medea."

Layers of original steel plate, adhesive, core, adhesive, and fiberglass. Courtesy of Arthur DeFever, Naval Architect, San Diego.



Anchor windlass on the *Medea*. Courtesy of J. S. Dean, Racine, Wisconsin.



Above: Gauges in engine room of *Medea*. Below, right: Robert Crawford, Chief Engineer, *Medea*. Below, left: Funnels of steam launch *Medea*. Photographs courtesy of J. S. Dean.





Above: Bowsprit of *Medea*.
Left: Robert Crawford, Chief
Engineer, holds a section of
Airex core bonded to the
fiberglass shell. Photographs
courtesy of J. S. Dean.

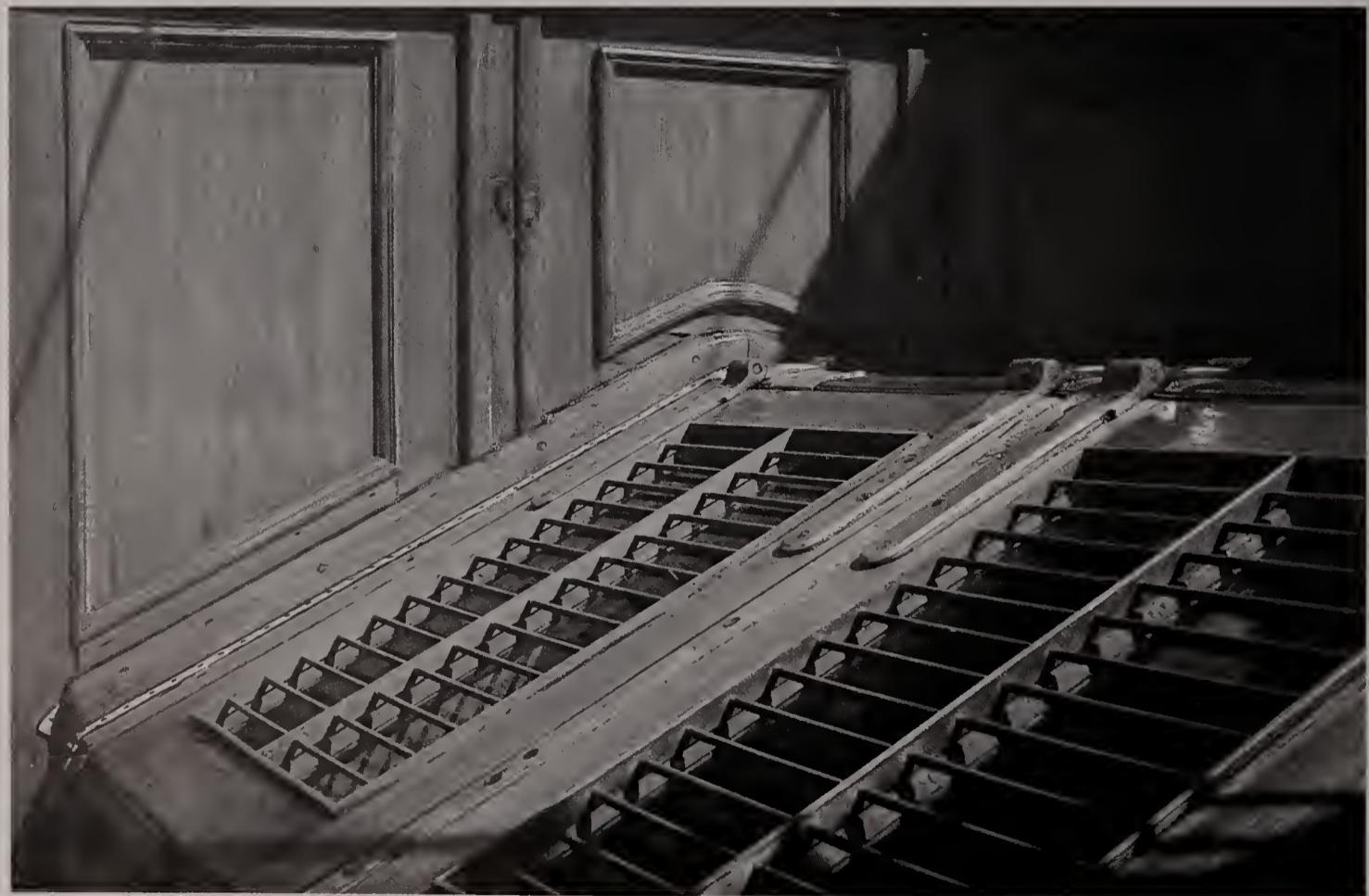


Above: Dining salon on the *Medea*. Right: Oak paneling and stairs leading from dining salon to cabins below. Note McAllister Hall's coat of arms on the wall. Photographs courtesy of J. S. Dean.



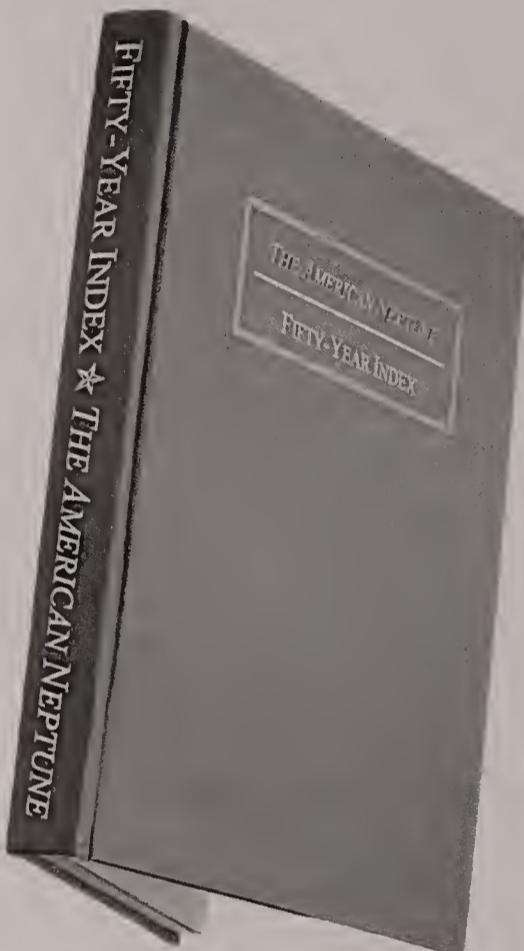


Left: Copper kettles on the stove in *Medea*'s galley. Below: Brightwork and skylights over the engine room, amidships. Photographs courtesy of J. S. Dean.





Medea's sitting room, decorated in Edwardian elegance. Courtesy of J. S. Dean.



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METHODISTS TO THE CALIFORNIA GOLD FIELDS IN 1849

by Charles R. Schultz

The great majority of the thousands of young men who decided to travel around Cape Horn in a sailing vessel to seek their fortunes in the newly discovered gold regions of far distant California in 1849 had little idea of what they were getting into. Their knowledge of California and mining methods was quite limited. Their knowledge of life in a sailing vessel was probably even more limited. Most of them seem to have made decisions on what to take with them based largely upon what they read in articles and advertisements in the paper in the port from which they chose to depart. Some of them went as independent miners, some as members of joint stock mining and trading companies, and a few went as missionaries to this relatively unsettled area.

Charles R. Schultz has been professor and Clements Archivist at Texas A&M University since 1994. He served as University Archivist there from 1971 to 1994. Prior to that he worked as Keeper of Manuscripts and as Librarian at the G. W. Blunt White Library at Mystic Seaport Museum from 1963 to 1971. This article comes out of a research project, the major product of which is the monograph *Forty-Niners 'Round the Horn* published by the University of South Carolina Press.

Early in 1849 Reverend William Taylor was chosen to go from Baltimore, Maryland, to San Francisco as a Methodist missionary. At the same time Reverend Isaac Owen was dispatched overland from Iowa to become a Methodist missionary in Sacramento.¹ Reverend Taylor took passage in the ship *Andalusia* with his wife, who was then several months pregnant, and his children for the hectic and dangerous voyage around Cape Horn to San Francisco.² Miss Virginia Kimberline, who appears to have had some responsibility for caring for the Taylor children as well as some missionary duties once they arrived in California, accompanied the Taylor family.³

Included among the large quantity of cargo carried in the *Andalusia* was a prefabricated chapel framed in Baltimore by John W. Hoag so that it could be quickly assembled in California. The nearly \$1,200 needed to pay for the structure and its transportation was raised in Baltimore. Also included in the cargo were several houses ready to be set up, the frame for an extensive hotel, a steam saw mill, a steam grist mill, a dredging machine, a pile driver, a suction engine, several carts and wagons, five boats, farming equipment and utensils, huge quantities of provisions to feed the members of the several mining companies for two years, twenty thousand feet of lumber, and forty-five thousand bricks.⁴

When the weather permitted, Reverend Taylor conducted regular Sunday worship services on the deck. Benches and an altar of sorts were set up for each service. Another minister, Robert Kellan, was taken on as a passenger during their stop in Valparaiso, Chile, for supplies. Thereafter, Taylor and Kellan both conducted services. The niece of Captain Willson, Anne Willson Booth, regularly noted these services in the journal she kept during the entire voyage. On several occasions she indicated that Reverend Taylor was not particularly popular with the passengers. She later contrasted his personality style with that of Robert Kellan, who, she thought, was liked considerably better. According to Miss Booth, Taylor was a rather aloof person who did not mix and mingle with the passengers. Kellan mixed very well with them and even assisted in making repairs to the vessel on a Sunday after she was damaged during a storm. Taylor, on the other hand, condemned the work on the Sabbath.⁵

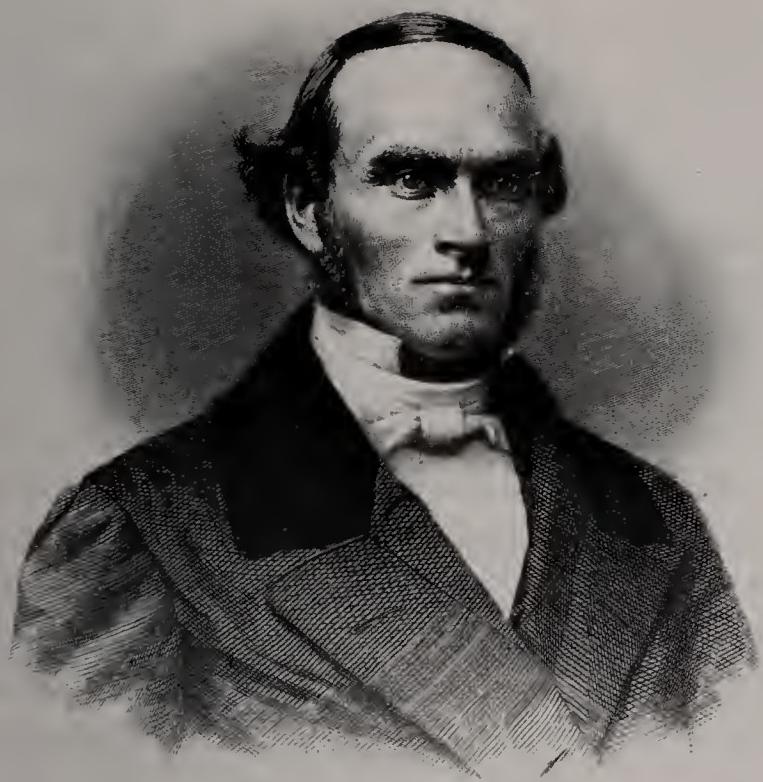
The *Andalusia* arrived in San Francisco on September 21, 1849, 155 days and eighteen thousand miles after leaving Baltimore. Soon after the *Andalusia*'s anchor was dropped, a brother of one of the passengers visited the ship, bringing news of the situation in California to the new arrivals. He reported that there was "peace and plenty" throughout the country, and that fortunes were available for all who "could work or gamble expertly." He mentioned the wages being earned in various occupations, "gamblers were the aristocracy of the land," and as gambling was the most profitable occupation, it was "the most respectable business a man could follow." Taylor asked if there were any ministers or churches in the city. The man responded that there had been one preacher, but he became a gambler because preaching did not pay. The one church had been converted into a jail. When they told the man they had a church on board, he advised selling it, as they could get \$10,000 for it. Taylor reported

his church was not for sale. He went ashore the next day and learned that gambling was indeed profitable and respectable, and that it was a school building that had been used as a church and had been converted into a jail. He also learned that there were active churches with regular Sunday services in the city.⁶

On September 22 Taylor went ashore with Captain Willson and Reverend Robert Kellan to see if he could find any Methodists, and especially to find his cohort Reverend Isaac Owen, who was to come overland from Iowa. Taylor met several businessmen, one of whom told him of a family named Finley who were supposed to be Methodists. When he located the Finleys, he learned they were Campbellites. A bit later he encountered John Troubody, whom he called a "real Methodist." Troubody introduced him to Reverend O. C. Wheeler, a Baptist minister, who invited Taylor to preach at his church on September 23. Wheeler also introduced Taylor to Asa White and his family, who were originally from Illinois but had just arrived in San Francisco from Oregon.

While visiting with White, Taylor received a letter from Reverend William Roberts and learned that the church he brought in the *Andalusia* was to be sent to Sacramento to be used by Reverend Isaac Owen. Roberts obtained a lot in San Francisco on which a church was to be built for Reverend Taylor and ordered lumber from Oregon for the construction of that church. As that lot was outside the then city of San Francisco, near the corner of Montgomery and Pine Streets, it was sold and another purchased on Powell Street. The church on Powell Street was constructed quickly and was dedicated on the third Sunday in October, only a month after Taylor arrived in San Francisco. It measured twenty-five feet by forty-five feet and cost \$1,500.

On the day the church was dedicated, Taylor baptized his daughter Oceana, who was born on board the *Andalusia* off the coast of Brazil. He was assisted in the dedications by other ministers



Reverend William Taylor, from William Taylor, *Seven Years' Preaching in San Francisco, California*.

from Baptist, Presbyterian, and Congregationalist churches. In 1851 an addition measuring twenty feet by thirty-five feet was made to the Powell Street church at a cost of \$1,600. Three years later that church was sold and a new one measuring fifty by eighty feet was built at a cost of \$5,000.⁷

Undoubtedly, the largest contingent of Methodists and others who shared their beliefs to arrive in California were the seventy-six members of the California Mutual Benefit and Joint Stock Association. They arrived in San Francisco in the ship *Arkansas*, on December 19, 1849, after a voyage of 178 days that included stops in Rio de Janeiro, Brazil, and Talcahuano, Chile. Their voyage of nearly six months was preceded by six months of preparations in New York by the company and its agents. The seventy-six members were joined by thirty-six other passengers and nineteen officers and crew.⁸

The California Mutual Benefit and Joint Stock Association was one of many such groups being organized in New York City and other ports up and down the East Coast, as well as in

inland towns and cities. It appears to have been the only one that attempted to limit its membership to a single religious denomination. In its formative days and for about the first three months, its members were required to be members of the Methodist Episcopal Church or to agree with that denomination in sentiment. Individuals could join the Association by paying (or committing themselves to pay) \$300, which entitled them to a share in the *Arkansas*, passage to California, mining tools and machinery, housing, and food for eighteen months. The members did have to provide their own bed, bedding, and clothing. They were required to pay \$50 when they signed the constitution and the remainder within five days after being notified it was due. All members were to be examined by a committee regarding their character, health, and constitution. The maximum number of members was set at one hundred. At the point the group reached what they thought would be the total who would join, they planned to hold a meeting at which they would vote on all those who had applied for membership. Anyone receiving ten negative votes would be denied permanent membership and would have his money refunded. When it became apparent that they would not recruit one hundred members, they offered passage in their ship to others at between \$150 and \$250, depending upon the area in which they chose to reside aboard the ship. The Association was to remain in existence until March 1, 1850. Any stockholder could, however, withdraw up to half of his share of the profits of the Association.

The constitution and bylaws of the California Mutual Benefit and Joint Stock Association were in many ways typical of such organizations, but were still somewhat different because of their early connection to the Methodist Episcopal Church. The Association included a physician, who was to provide treatment for anyone injured or ill at the expense of the Association. Anyone who became too ill to work was still to receive a full share of the gold.

The members of the Association were to become an organized church and have worship services, bible classes, prayer meetings, and family prayers; and they would be subjected to the discipline of the Methodist Episcopal Church. The Association took along a missionary, who was to be supported in California in a church they would erect at their destination. There were two other Methodist ministers in the Association—James McGowan and M. E. Willing—who assisted in conducting the church services. It was to have nothing to do with the prevailing politics of the day. All of their meetings were to open and close with a prayer. No work was to be done on Sunday except works of necessity and mercy. The only liquor allowed in the ship was for medicinal purposes. Anyone who violated the constitution and bylaws was to be fined, reproved, and expelled or suspended. No member was to engage in any activity for personal profit. Any member who provided private goods had to put them into the common stock, but he would receive twelve percent profit. Non-members whose goods were sold by the Association would receive fifty percent profit.⁹

During this organizational phase, the group held frequent meetings at a variety of locations under the leadership of provisional president William Hilton until early April 1849, when the Reverend Calvin Lathrop became president. They continued to hold between one and five meetings per week depending upon what business there was to transact.¹⁰

By early April 1849 the California Mutual Benefit and Joint Stock Association was fully organized and had revised its constitution substantially. The major change seems to have been to sever the relationship with the Methodist Episcopal Church. Although church membership was no longer required, Christian habits were mandated as were promises to attend public worship of God. Reverend Calvin Lathrop, a minis-

ter of the Methodist Episcopal Church, served as chaplain of the Association. They intended to organize a Methodist mission in California.¹¹

Although the California Mutual Benefit and Joint Stock Association purchased the *Arkansas* as early as February 13 and intended to sail as soon as possible, their departure was delayed for a considerable length of time. Possible causes for the delays include the slowness with which members joined the Association and with which non-members purchased passage in the vessel because of the great amount of competition by other associations for members and other vessels for passengers. The *Arkansas* was first scheduled to sail on May 3, then was rescheduled for May 20, then June 12, then June 14, and then almost daily until she actually departed on June 26, 1849.¹² Such delays undoubtedly caused considerable frustration on the part of members of the Association, other passengers, and shippers who had agreed to send cargo. Benjamin H. Deane of Coluaine, Massachusetts, and five associates booked passage in the *Arkansas* on May 29 for \$200 each, expecting her to sail shortly. During the next month he described his frustrations in some detail in his journal. At one point he became so frustrated with the delays that he referred to the Association as the Joint Humbug Society.¹³

Benjamin H. Deane and two of his friends spent much of their time during the first two weeks of their stay in New York visiting museums, theaters, and other points of interest in the city and in purchasing the vast array of articles they were told they would need to take with them to California.¹⁴ By June 11 they had completed all their purchases, assuming they would sail June 14. On that date Deane learned they might sail on June 20, but expected they would be disappointed and delayed another time. Deane and his friends, Steward and Dennison, visited the ship every day thereafter and witnessed several meetings of the Association.

From Deane's recorded observations, it is obvious that he had a low opinion of the leader-

ship and the general membership of the Association. He noted the leaders did not understand parliamentary procedure or how to properly conduct a meeting. He had "listened to an animated conversation" being carried out by of the "members of this magnificent association" in which they accused each other of lying. Deane heard "all manner of hard words passed for an association of Methodist Brothers."¹⁵

When Deane and Dennison visited the ship on June 20, they learned she would not depart before June 23. They were disturbed when they were asked to pay all of their bills to the Association. Deane thought the Association was "the most contemptibly managed concern I ever knew" as all the cargo had been on board for a full week and the ship was still not ready for sea. They spent the next three or four days dickering with the company officials over their passage and freight bills as well as their hotel and board bills during their extended stay in the city. They finally settled those issues on the June 23 and moved on board the *Arkansas* two days later.

After having slept on board the first time Deane noted he hardly knew how he would "pass five months in the same place." There had been a serious accident to one of the passengers as he was boarding. Because of the crowded conditions at the wharves, the passengers had to cross over the ship *Brutus* to reach the *Arkansas*. A passenger named Barrome was struck by a large package hoisted out of the hold of the *Brutus* and fell into the hold, where he hit his head on some iron. He was treated by the physician of the Association and apparently recovered completely.¹⁶

The members of the Association had their first meal on board the *Arkansas* on the morning of June 26, 1849, the day they sailed. Other passengers were not invited to that breakfast. By 9:00 A.M. friends and family members of the passengers began to board the ship to accompany them away from Judd's Wharf. Shortly before noon the steam tugboat *United States* arrived at the wharf to tow the *Arkansas* to open water.

Those who remained behind at the wharf, as well as those on board the ship, raised cheer after cheer. As they were passing Governor's Island, the captain noticed a small boat headed for the ship carrying a passenger who had been left behind. He stopped the ship to wait. Those on board the *Arkansas* sang songs, and two "Rev. Devines" spoke to the passengers and the visitors on board. Shortly before 3:00 P.M. the announcement was made that all visitors would have to leave the ship and board the steam tugboat. This was accomplished in half an hour, and the *Arkansas* was released from the tugboat. Before dark they had lost sight of land. By that time several of the passengers were already seasick.¹⁷

California Mutual Benefit and Joint Stock Association had seventy-six members who sailed in the *Arkansas*. There were an additional thirty-six non-member passengers (including six children and eight adult females) and a crew of nineteen officers and sailors on board. The Association had chosen a new set of officers, a board of directors, and committee members as follows: President, Dr. D. W. Randle of Keokuk, Iowa; Vice President, James Millington of New York City; Secretary, Sherold D. Stone of New York City; Corresponding Secretary, E. D. Whiston of Wyoming, Pennsylvania; Treasurer and Chaplain, the Reverend Calvin Lathrop of Newark, New Jersey. Members of the Board of Directors were H. Hoag of Cannonsville, New York; H. A. Veeder of New York City; G. W. Greene of Greenbush, New York; Lewis M. Burson of Stroudsburg, Pennsylvania; Truman Halvey of Troy, New York; Ichabod Lockwood of New York City; and John M. Flagg of Martinsburg, Virginia. Members of the Finance Committee were William N. Brown of Stockbridge, Massachusetts; J. Q. A. Stanley of Wilkes-Barre, Pennsylvania; and Samuel Stafford of New York City. R. S. Lane was the agent of the Association in New York.¹⁸

Throughout the voyage from New York to San Francisco, with stops at Rio de Janeiro, Brazil, and Talcahuano, Chile, the passengers experienced many things typical of what passengers on other sailing vessels bound to California experienced. They suffered through the heat of the tropics, the cold of Cape Horn, and the chills of the Pacific near San Francisco, storms in various regions, sickness and even death of fellow passengers, difficulties among themselves, problems with a variety of pests, disappointment with food and drink, Sunday worship services, holiday

celebrations, dismay over the length of the voyage, and the wonders of two South American port cities and the different cultures of the people in them. In addition, they experienced the rare birth of a child on a vessel bound to California and the near destruction of their vessel in San Francisco.

Many of the passengers became seasick virtually as soon as they entered the Atlantic Ocean. Both Deane and Ferrell document that many passengers were seasick for several days. In fact, Deane and two of his friends suffered for nearly a month with a variety of illnesses. These included

CALIFORNIA MUTUAL BENEFIT AND JOINT-STOCK ASSOCIATION.

A company is now forming in this city, with the above title, for the purpose of trading and mining in California.

The plan of this Association is to form a community of from fifty to eighty persons, each to invest \$300, to be deposited in bank, in the name of the contributor, for the purpose of purchasing a suitable vessel, and fit her out with provisions for one year, and necessary articles for mining and trading; the vessel to carry the company by way of Cape Horn, and to be used as a home when in California.

Persons wishing to join this Association must be members of the METHODIST CHURCH, well recommended; men of strong constitutions, industrious, habits, teetotalers, warm-hearted Christians, who will carry out the principles of Christianity wherever they go, and under all circumstances, and will share and share alike, having no separate interests, submitting to the decision of the majority in all cases; as all matters connected with the Association will be decided by plurality of votes of all the stockholders. Those who approve of the plan, and answer the description of persons above stated, will have all necessary information by addressing a letter, post paid, with the name, and where an interview can be had, to

Dec. 27, 2t. W. H., New-York Post Office.

One of the earliest advertisements for the California Mutual Benefit and Joint Stock Association. From the *New York Christian Advocate*, January 11, 1849. Courtesy of the United Methodist Church Archives, Madison, New Jersey.

seasickness, diarrhea, and dysentery. Ferrell, on the other hand, seems not to have been troubled by any type of illness, but he observed that all of the ladies except the wife of Captain Shepeard were ill. He also carefully noted that there were nine professional physicians and "a No. of quacks" among the passengers.

The passengers in the *Arkansas* witnessed the first death of a fellow Argonaut after only nine days at sea. In a dead calm around noon of July 5 Captain Shepeard permitted some of the men to lower a boat to go swimming in the ocean. Charles M. Griffith, one of those who went swimming, was weak from recent sickness. He went down on a rope and swam toward the boat that was a short distance away, but he was unable to hold onto the boat and sank within five minutes of entering the water. Seemingly everyone in the boat as well as those on board the ship waited for someone else to attempt a rescue. Finally, Captain Shepeard dove from the ship and attempted to rescue Griffith, but was unsuccessful. This drowning had a profound affect upon the other passengers, and many of them vowed never to bathe in the ocean again. That evening at 5 o'clock Reverend Calvin Lathrop preached a funeral sermon and "all joined on the mournfull occasion and became mourners indeed." Ferrell wrote, "There was many teers shed. . . . It will be a lesen to us all." Later that evening a committee of Griffith's friends was appointed to prepare his possessions for a sale the next day according to the custom and law of the sea. Fellow passengers were generous in their bids so that, according to Deane, most items sold for three times what they were worth in New York. A gallon of brandy worth \$1.75 sold for \$6.12. The proceeds of the sale were intended to be sent back to New York, where they would be divided between Griffith's sister and two brothers.¹⁹

Nearly two months later the passengers experienced two more deaths on successive days. On September 23 a black cook, who had been signed on during their stop in Rio de Janeiro a

couple of weeks earlier, died after several days of suffering from a fall. Seemingly, a couple of the members of the Association gave the cook an overabundant amount of liquor in hopes of making friends with him. The cook fell down a gangway, breaking some ribs and suffering other internal injuries. He was buried at sea that evening, sewn in canvas with a bag of sand at the bottom. James McGowan read the burial ceremony on deck, and M. E. Willing preached a funeral sermon in the cabin due to the extremely cold conditions on deck.²⁰

The next day, September 24, Dr. John M. Flagg of Martinsburg, Virginia, died after an illness of several days. Deane said he suffered from an inflammation of the bowels. Ferrell noted that Flagg suffered from diarrhea shortly after they left Rio de Janeiro on September 6, but did not seek medical assistance from any of the doctors on board at first. When he did seek that assistance, the doctors "neglected him." Flagg was fifty years old according to Ferrell and a Universalist who refused to have anyone pray for his recovery. The Episcopal burial service was read from the Book of Common Prayer before he was buried in the Atlantic Ocean. Ferrell hoped that all would be well with Flagg because "it is a sandy foundation to all that dyes" in the Universalist faith. Dr. Flagg's clothing and medicines were sold at auction by Captain Shepeard on October 5.²¹

It was very common for those sailing to California in 1849 to expect at the outset to have church services on board every Sunday. Those in the *Arkansas* followed the dictates of the bylaws of the California Mutual Benefit and Joint Stock Association closer than many groups by having worship services on Sundays. More often than not, they had services in both the morning and the afternoon. Deane, who was not a member, was more consistent than was member Ferrell in recording information about the services. Ferrell often had no entry in his journal on

Sunday or made no mention of a church service. Between July 3 and August 12, 1849, there were morning and afternoon services with Rev. Calvin Lathrop and Rev. James McGowan (spelled Megouing by Ferrell) alternating conducting. Ferrell reported on August 12 that the sailors had their own services:

Brown, one of the sailors, Preached on the forecastle. It was an elloquent Discourse. He stuned up the cold harted profesars. After the sermon they held a prayer meeting with telling their experinse which lasted to 11 o'clock. My friend Green took an active part in it. It was a refreshing time.

On August 19 they were near, and possibly had entered, Rio de Janeiro, Brazil, and had no church services. Deane reported that chaplain Lathrop had "resigned because the Association did not think enough of him." If he actually did, he must have reconsidered or been persuaded to change his mind, as he did preside at services later during the voyage. The passengers in the *Arkansas* spent the Sundays of August 26 and September 2 and 9 in Rio de Janeiro. On September 9 Ferrell mentioned that Lathrop and M. E. Willing conducted the two services. He then added:

Sinse we left reo gambling in the cabins apiers to be the order of the day and Knight. There is a great many profesers on board but few persesers. This is a great scool to learn human nature. When they get away from home and in a distant land they loose all restraint and each trys to excell his neighbour in wickedness.

It is not clear from the record if the passengers gambled on Sunday.

They had their regular worship services on September 16 and 23, but for the following four weeks there were no services because of the extremely bad weather in the vicinity of Cape

Horn. October 28 and November 4, 1849 they were in Talcahuano, Chile. They did have two services on board on November 4, however. Teresea Cornelia Randal Shepeard, the daughter born to Captain and Mrs. Shepeard off Cape Horn in 60° south latitude was baptized by Reverend McGowan during the afternoon service, which was attended by the American Consul Mr. Crosley. Between November 11 and December 16, 1849, one or two services were held on board the *Arkansas* on all Sundays but November 18 and December 9. Bad weather on the latter date might have made it impossible to have church. Deane wrote on November 25, "Caught some fish that are called Albacore which were very fine indeed. The pious or would be considered so justifies fishing on the sabbath because there is no fresh provisions on board. Mr. Mathews caught quite a large one which so pleased him that he was almost beside himself." On December 23 they were in San Francisco, and those interested in worshiping did so on shore.²²

California-bound passengers in 1849 celebrated every national, some state, and a few other holidays that occurred while they were on their voyages. Those in the *Arkansas* spent only July 4 and Thanksgiving at sea and had appropriate festivities for each. July 4 came after they had been at sea only a few days. They had a meeting on the quarter deck on the evening of July 3 to plan the activities for celebrating Independence Day. At 6:00 A.M. "The day was ushered in with a grand salute of Small arms which seemed to do the heart of every true American good." After breakfast everyone gathered on the quarter deck to hear reports of the various planning committees chosen the previous evening. Dr. D. W. Randle of Keokuk, Iowa, president of the California Mutual Benefit and Joint Stock Association, presided and announced the program for the day. They sang songs and listened to a prayer by the Reverend James McGowan and

"an extempore Oration" by a Mr. Benson, "a Gentleman from Penslvania," that was "listened to with interest by all onboard."

After more singing and another prayer, they adjourned for dinner. Neither Ferrell nor Deane reported what they had to eat for dinner, but Deane did say they were "agreeably surprised to find such a dinner prepared for us and as we were all in good spirits we did ample justice to it and in that way complimented the steward very well indeed." Captain Clark reported as chairman of the Committee on Refreshments that there was plenty of "Brandy, Port wine, and Lemonade with Port Wine" for the celebration. This presumably was for drinking their toasts. A Mr. Kuler, chairman of the Committee on Sentiment, presented the "regular toasts which were received with a greate deal of enthusiasm." He then called for volunteer toasts, and "a great proportion of the passengers" responded "in the most enthusiastic manner and were received with aney quantity of cheering." Deane also noted evidence of some experience in the drinking of toasts:

I should judge that our temperance people had left their principals at home as they made it in their way to compliment the brandy and Port wine as though they were old and dear friends. . . . Several patriotic speaches were made and received in the best feeling imaginable.

After the speeches, they concluded with "a grand salute of small arms. . . . On the whole I never remember spending the fourth of July more pleasantly. Everything passed in the most pleasant manner and all seemed to vie with each other to make all happy. I did not expect to pass the fourth in so appropriate a manner."²³

On November 22 Captain Shepeard issued a proclamation designating November 29 as Thanksgiving on board the *Arkansas*. Deane noted he was appointed as one member of the Committee of Arrangements and added "This

mark of honor was too much for my week nervs." On November 27 and 28 he mentioned that "the ladies," of which there were eight on board, were making preparation for the celebration of Thanksgiving and the special dinner. In discussing the dinner, Ferrell noted he was giving a "description of the first luxciarys we have resieved on Board sinse we left New York. In the morning for breakfast Coffee and hash, for dinner ham and mashed pateightows [potatoes], a piee of pie. It looked like minse with a peese of cake. For tee we had see Bread and Black tee." Deane reported they had a "very good dinar with mince pie, five small chickens for forty five to dine upon, nuf sed, boiled ham." Both men reported they had a worship service in the morning with M. E. Willing presiding and that a Mr. Fish gave an oration in the afternoon. They both also mentioned singing by the "tigers." Ferrell referred to them as being the "Captain's tigers" and noted they sang Negro songs with dancing. Deane simply mentioned an "evening concert by the tigers" and added that one passenger named Watkins got "tight" and made a speech. Three other men who helped themselves to three quarters of a pie each because they feared they would not get "their share of the pie." Ferrell concluded: "It was truly a grate day of thanksgiving and festing. There was two parties, one for God and one for the deevil, the later Belongs to the Captain."²⁴

On board several of the California-bound vessels in 1849 there were established bills of fare in which the meals served each day of the week were posted. It appears as though the passengers in the *Arkansas* did not have a set bill of fare for each week, although Ferrell reported on July 8, 1849 that once a week they had lobscouse, which was "made with sea biskit and scraps of salt junk and greese mixed all up together." Duff, "flour mixed up in water and put in a bag and boiled," was served as an "extra dish." Deane and Ferrell wrote about food only occasionally. Most

often it was when they had something special or when the food was particularly bad. The exact living and eating arrangement of the passengers cannot be determined with certainty from the two journals, but it is clear that some people lived in a cabin on deck while others resided below. Ferrell reported the people in the cabin had better food that was better prepared than did those below deck. He implied at one point that the members of the California Mutual Benefit and Joint Stock Company lived and ate below deck.

There was considerable dissatisfaction with the food between New York and Rio de Janeiro. On June 28, 1849, after only two days at sea, Ferrell reported "Great dissatisfaction about pravisens. We have had nothing but hard bread." On July 15, 1849 he wrote, "great dissatisfaction on board on account of our living. We cant use our butter. It stinks. We cant use it. Our coks dont understand their business." Probably because of the considerable complaints about food and how it was prepared, two new black cooks were hired in Rio de Janeiro and started work while the *Arkansas* was still in port. The former cook, a man named John, assumed the position of steward. As a result, the quality of food and the cleanliness of the galley, plates, knives, and forks improved markedly. On September 7, 1849, one day after leaving Rio de Janeiro, Deane clearly became optimistic:

We now have had some improvement in our living. . . . Our dinner consisted of Bean soup (good) boiled Pork, Irish and Sweet potatoes, Pumpkins, Pork & Beans all first rate with the chinkings & Plantins Boiled and for desert Bananas. This we call a first rate dinner. For tea, Tea & Coffee, cold pork cut in thin slices, first rate buiskets, with poor butter, but good molasses. This we call good living equal to Butter on Sausages.

He wrote only once more about food late in

November, and he had fewer good things to write then. Although there was considerable improvement after the stop at Rio de Janeiro, Ferrell reported unhappiness in the way the food was divided. On October 9, 1849, those below deck were not served any food made with flour, but rather were served "corn mele Johny cake mixed with water alone, not half anuff of that." He added that it was "dealt out to every man when his name is cawled" and that they ate it like "slaves stored in a howld of a vessel." Ferrell also noted that "Every thing that is fit to ete is reserved for the cabin." He blamed all of this on Captain Shepeard, who he said "has the prerogative at see," but added, "There will be a day of deliverance from this prison." Ferrell did not write any daily entries between November 4 and 21, but between those dates he wrote that during the time they sailed from New York to Talcahuano "we the asascation did not have but a few messes of potatows and flower. It was taken from us and consumed in the cabin with other artickels of comfort such as coffee and ham. All that cept down mutiny was the influence of religan." The board of directors appointed two members to purchase food for the Association and let the captain purchase food for the cabin. Ferrell noted after leaving Talcahuano that they had "flower and potatows which is a grate luxuary for us that has bein living on salt gunk."²⁵

During the six months of their voyage, the *Arkansas* passengers found a variety of ways to amuse and entertain themselves. Neither Deane nor Ferrell wrote extensively about the forms of amusement and entertainment, and Deane wrote considerably more than Ferrell. In fact, Ferrell noted only the extensive gambling on board just after they left Rio de Janeiro and two occasions in September when passengers attempted to catch some of the numerous birds of several varieties around the ship between Rio de Janeiro and Cape Horn. Deane wrote on consecutive Mondays in July and August that the Arkansas Debating Society had been organized to meet every

FOR SAN FRANCISCO

AND THE GOLD REGIONS. The packet-ship *Arkansas*, of 627 tons register, P. W. Shepherd, master, is now receiving Freight, and will sail as soon as freighted for California. She is a superior vessel, and her accommodations for passengers are excellent. This ship is owned by the California Mutual Benefit and Joint Stock Association, which is formed of persons of religious or good moral character, who take with them a chaplain, a well qualified Physician, a Geologist and Assayer, with the most approved machinery for mining. A few more persons answering the above character will be received into the Association, if application be made soon—\$300 is the price of a share, which entitles the holder to his voyage, a share in all the property of the Association, and provisions for 18 months. To persons desiring agreeable companions and trust-worthy partners this Association offers peculiar inducements. Several gentlemen with their families have already taken passage. Persons wishing passage in the cabins, or saloon with the Association, may apply to Thos. Wardle, 89 South-street, or to James Bishop & Co., No. 3 Beaver-st., N. Y. For shares in the Association apply personally or by letter, post-paid, to Rev. C. Lathrop, 93 Broadway, N. Y. The ship can be seen at Pier 36 East River, near Catharine Market.

New-York, May 3, 1849.

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An advertisement for the ship *Arkansas* and the California Mutual Benefit and Joint Stock Association shortly before sailing. From the *New York Christian Advocate*, May 10, 1849. Courtesy of the United Methodist Church Archives, Madison, New Jersey.

Monday, but he never mentioned it again. During the middle of July the *Arkansas Courier*, "a paper got up by the passengers and edited by Cap. Shepeard made its appearance to day for the first time." Deane had not seen this news medium, and he never mentioned the paper again. Early in the voyage he mentioned dancing on deck. Once he mentioned studying Spanish with Dr. Perry. On several occasions he mentioned books he had read or was reading. He appears to have read the Bible with some frequency. He also mentioned attempts to catch birds with fishing lines baited with small pieces of pork.²⁶

Visits from King Neptune and his court to induct those who have not previously crossed "the line" were fairly common in California-bound vessels in 1849. As the *Arkansas* approached the

equator on August 6, 1849, "Neptune came on board in the person of old David, an old and very good sailor." He gave notice that he would return on the morning of August 8 "to attend the shaving of those who for the first time have intruded upon his dominions." After making that announcement on the quarterdeck, "he made his way forward and from there vanished in a cloud of fire." Some of the passengers declared "they would shoot him and all such things . . . if he undertook to shave them." At about the same time as Neptune boarded the *Arkansas*, Bacchus, "in the person of one Dr. Cram," came on board and created enough of a disturbance that Captain Shepeard handcuffed him. When he promised to "take to his berth and not leave it until morning," the captain released him.²⁷

During their stay in Rio de Janeiro, both Ferrell and Deane, along with some of their friends and associates, visited the city and the surrounding countryside. Ferrell reported only briefly upon what he saw during his visits, but he mentioned seeing the Emperor's castle and the grounds surrounding it. He summarized the eighteen day stay in Rio de Janeiro in one moderately long entry. Ferrell noted that seven-eighths of the thirty thousand residents were black slaves, and was astonished at the weight they could carry on their heads. Some could carry three hundred pounds or more in that fashion. Although the slaves appeared to be very happy, Ferrell thought slavery was a curse to the country. He noted one could distinguish the slaves from the free citizens easily as only free citizens could wear shoes. Slaves were required to go barefoot. Ferrell also saw religion as a problem: "Priest craft rains in this territory to a great extent. Every hill and square is doted with nunerys." He found the people in the country and through much of the city to be very friendly to the visiting American adventurers. Even the Emperor and his wife were friendly. Ferrell and some companions met them while they were touring the gardens surrounding the palace. The depredations along the shore by a few visiting California-bound passengers caused citizens in that part of the city to resent the American visitors.²⁸

Deane wrote lengthy descriptions nearly every day of what he did and saw during the stay in Rio de Janeiro. Most days he left the ship to go exploring, but a few days he stayed on board and wrote letters and descriptions of what he did and saw. He was particularly impressed with the quantity and quality of fresh fruit that was available and regularly ate large numbers of oranges and bananas. He made visits to the Hôtel de Pharoux, which he noted was a French hotel equal to that of the Astor in New York. Deane also toured and described the Opera House, the Senate chamber, the Cathedral, the botanical gardens, a bull fight, the government museum

(which appears to have been a combination zoo and museum), a place where artificial flowers were manufactured using bird feathers, and the Emperor's palace and gardens. He commented upon the people, the birds and animals, and the buildings he saw during his rambles through the city and the countryside. He was also greatly impressed by the friendliness and kindness of the Brazilians but thought that they were quite backward compared with the people of his native New England. Deane also reported that only free citizens were allowed to wear shoes and that slaves were required to go barefoot.²⁹

Between their departure from Rio de Janeiro on September 6 and their arrival at Talcahuano, Chile, on October 30, the struggle to get around Cape Horn was the major event in the lives of the passengers in the *Arkansas*. They were struck by a "heavy gale" on October 25 that was so severe that the members of the Association were called upon to assist the sailors in working the ship. Ferrell noted the gale lasted from Tuesday through Saturday, and added the wind was so strong that "At one time her Lee rail and almost half her deck was under water for the spase of 3/4 of an our." The Captain and mates stood by ready to cut away the masts, but eventually the *Arkansas* "righted as the carpenter was gowing to cut away the Brases." Ferrell reported that the five captains and some old sailors on board all said they had "never witnessed so heavy a storm in their Lives." He added that this "set professers and non professers to praying. There was not a sowl on board but what felt alarmed. The hatches were all nailed down. It was truly an awful seen. It was truly a providenshel afair" that they survived. During the storm they "laid to under a close reefd topsail" and were blown backward more than eight degrees. Eventually, twenty-four members, including Ferrell, would work regularly as sailors.

Ferrell provided more detail about the storm and some commentary upon some members of the Association:

It was a salam [solemn] time amongst the passengers and crew. We all comens a praying. There is a nomber of staterooms keeps up their prair meetings and the evening and morning worship is more strictly attended to. The stoutest harts on board trembled when the storm raged. There was a few on board of very wicked men that praid frequently that god would send the heaviest storm that every blew of Caper Horn. Their prairs was ansered.

He mentioned the numbers of times several of the men had been around Cape Horn and added that they all "aknoliges it was the heaviest blow the[y] ever saw."

After days beating to the westward, the *Arkansas* and her passengers finally passed Cape Horn and made sail toward her final destination of San Francisco with a stop in Talcahuano.³⁰

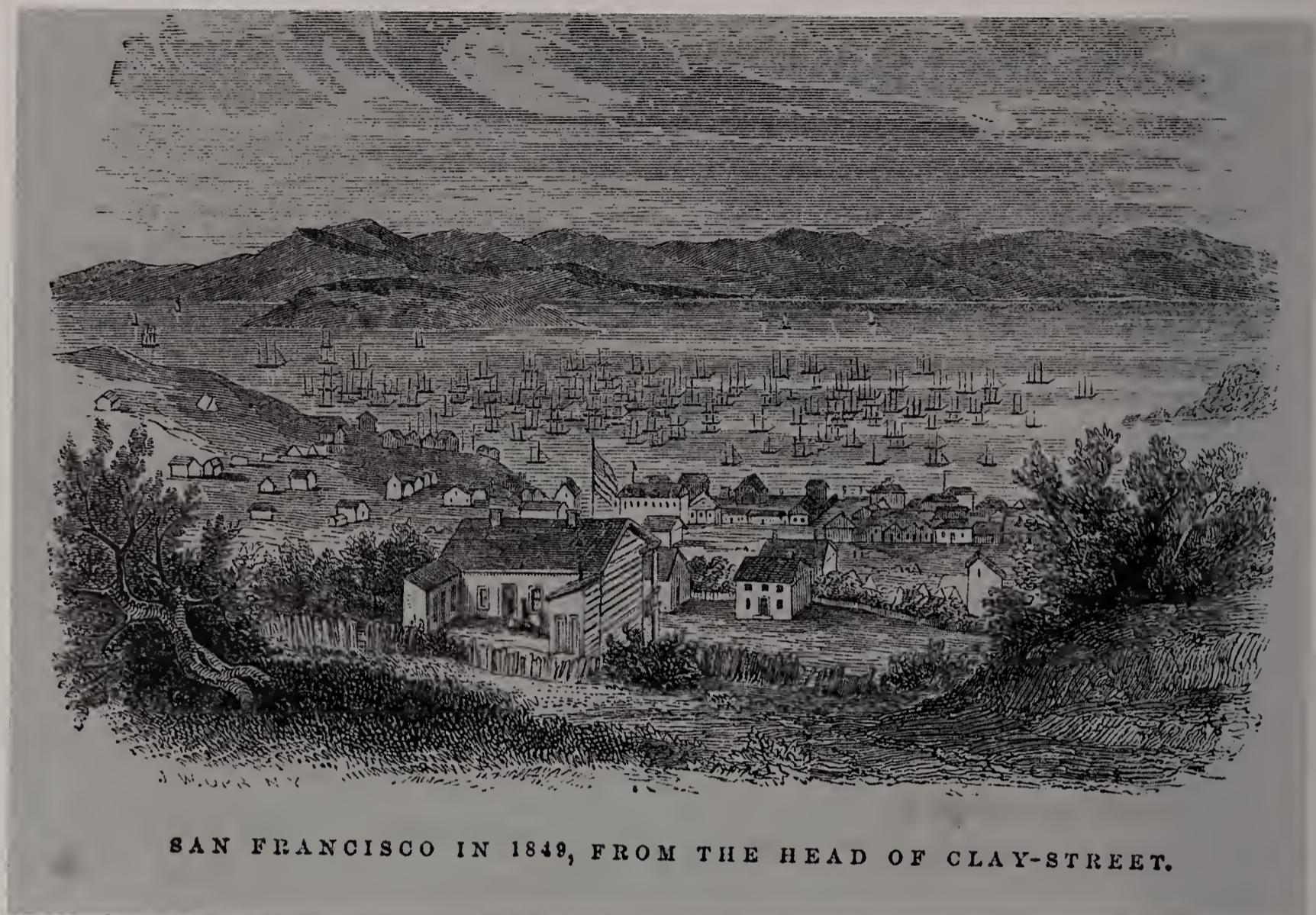
Both Ferrell and Deane also recorded what they did and saw in Talcahuano, and sometimes included their thoughts on how the Chileans compared with the people in their New England homeland. Once again, Deane provided more detail about what he did and saw than did Ferrell. Their stay in Talcahuano was from October 30 to November 7, 1849, substantially shorter than that in Rio de Janeiro. As was the case with the Brazilians, the Chileans were viewed as very backward in comparison with New Englanders in the minds of both journalists.

Deane took advantage of the opportunity provided in Talcahuano to send letters home to his family via a ship bound to Boston. He thought that the weather was wonderful, that the soil was "very good and firtile." The Chileans produced large crops with their current method of farming and added "with proper attention . . . the crops would be enormous." He noted that the "mode of Agriculture" of the Chileans was "the worst that I have ever seen." He was not impressed at all with the one room houses made of sticks plastered with mud that had dirt

floors and no chimneys. The church looked "more like an old delapidated factory than a church," and the prison was "a complete farce." He seemed pleased to find "Peas, new potatoes, lettuce, radishes, Strawberries, and a great variety of other vegetables" in the market, and added the strawberries were "very large and beautiful, being of the white variety." He purchased dried quinces for a quarter a peck, dried apples and dried pears for a dollar a bushel, and figs for ten cents a pound. He attempted to attend the horse race and was dismayed that it "did not come off while I was there." He was impressed with the horsemanship abilities of the Chileans, and with the number of horses, mules, and donkeys he saw during his visits on shore.³¹

Ferrell provided most of his information about Talcahuano (which he consistently wrote as Tuckerwarner) in one long entry and two rather short ones. Like Deane, he was impressed with the quality of the soil and its potential, but he had a low opinion of the abilities of the people of Chile. Ferrell devoted most of his writing to relating what his fellow association members did and how they lived in Talcahuano, and to the adverse affects the Catholic religion had on the city and the country:

There is about 10 thousand inhabetanse in tuckerwarner. I was informed by good athorety that there is only a few desent wiman in the plase. Mothers will sell their Daughters for a small [amount] of money to any yankey or white man for any lyngh of time. The[y] like the americans the Best. The most of our company lived with them. The[y] fowlowed them to the Bech and provaled on them to stop with them. We cant walk the streets without being pulled and hawled by girls with invitations to stay with them. There is some of them very handsom, alsow very neete. . . . The[y] are very ignorant. It is oweing to the priest Craft. The[y] will not alow any



SAN FRANCISCO IN 1849, FROM THE HEAD OF CLAY-STREET.

San Francisco in 1849 from the head of Clay Street. From William Taylor, *California Life Illustrated*.

religion but the Catholick religion in their territory. Their church looks like a barn inside and out. The[y] had a howly day the[y] cawled all saints day. From the church the[y] went to the grave yard with the Priests to pray for the dead. I had to laff to see the performance of the owld priests. The[y] had 4 bois caried candles. One boy caries howly water. The friends of the dead pays the priests for praying for the dead and sprinkling howly water over the grave. The Lynghth of the prayrs depends on the quantity of money. The poore creatures with scarce any clothing the[y] would give the owld priest a shilling he would sware at them and abuse them the[y] went way. For 2 rials he would laff

and make a long prayer. On the sabath the[y] have horse rases and cock fiting. The priests is there a beting and gambling with them.

In a later entry Ferrell added further critical commentary about the Chilean women and the male fellow association members' interaction with them:

The wiman is pashinately fond of americans. The[y] will come out on the street and coax them in to stay with them. The most of our company took them a wife while in port.³²

It would seem that Ferrell was disturbed by the

actions of his fellow association members. Conflicts among passengers, and between passengers and the captain, were rather common on California-bound vessels in 1849. Two on board the *Arkansas* are worthy of mention. Ferrell described a conflict between passengers that resulted from three men named Mills, Thrall, and Woodruff, whom he identified as being members of Captain Shepeard's "tigars," used "very ungentlemanly conduct" toward a Mr. Marker, whom he identified as "a methodised ministers son of Newark N. Jersy." Marker "got . . . very angrey" and told the other three "he would get a stick and bete the D[evil] out of them. He was good as his word. He went down on deck, fownd a fender off the cabin table, came on the poop deck, went at them with a good will, but Marker came off with a sowr head as some of the party cicked him in the eye." Because of this there was "grate excitement between the two partys methodist and anti methodists; however it was quelld and pece restored."³³ Other than this one incident, neither Ferrell nor Deane recorded any incidents that reflected any animosity between the Methodist members of the Association and the other passengers.

Ferrell and Deane both wrote about the dispute between Captain Shepeard and some of the officers of the Association which involved a bag of coffee being used by the Association for its members. Captain Shepeard claimed it was part of the stores for the ship. Robert Moffitt, one of the directors of the Association, claimed that association funds had paid for the coffee and asserted that Shepeard was trying to cheat the Association out of the coffee. There was some confusion regarding the markings on the bag. After heated exchanges of words, Moffitt and Shepeard got into a brief tussle in which Deane reported the captain gave Moffitt "a sound flogging which was well merrited and all seem to think so." Ferrell noted that although Captain Shepeard had treated him fairly, he "was down on the rest of the directors and most of the Association."³⁴ The fol-

lowing day Shepeard asked for a meeting of the Association to "apoint a comitee to investigate the charges laid against him from time to time by some of the members of the asosiation." The matter was thoroughly debated by the opponents and supporters of the captain. A motion was made that the investigating committee would be composed of the current officers who opposed Captain Shepeard. A second motion seemingly was introduced and passed to lay the matter on the table, thereby putting an end to the issue.³⁵

As the passengers in the *Arkansas* made their way from Talcahuano to San Francisco, they began to make preparations for going into the gold regions of California by making a wide assortment of things to use there. Deane reported occasionally between November 19 and December 14, 1849, that he and his fellow mates from Massachusetts (Steward and Dennison) were building a "Scow Boat" twenty-two feet long by eight feet wide which they would use to transport themselves and all their provisions to the "Gold diggins." Other passengers were working at black smithing, shoemaking, tent making, tailoring, coopering, and cap making, while others were making knives and handles for spades and picks. He noted a bit later in the month that the members of the Association conducted an extensive search of the vessel for the canvas they had brought along to make tents. They had thought it had been stolen, but they eventually found it. Near the end of the voyage some of the passengers began to cut up the foretopsail to make bags and knapsacks as the mate and the sailors were lowering it. They reasoned that as they owned the vessel they were free to use any part of it for their benefit. Ferrell made only one reference to groups of four to eight members forming into "Companys . . . of such spirets as can agree to work to gether in the mines," but he wrote nothing about what actual preparations were being made.³⁶

During the last three or four weeks prior to their arrival in San Francisco, Ferrell penned three

observations upon the character of his fellow association members and other passengers, and the lives they were living while away from their New England homes. In an undated entry between November 21 and 24 he noted, "We are composed of all classes of bings. A few Christions and a large nomber of anti-Christions, gamblers, and all other vises, boys of 14 years up to maried men 50 years needs Dr. Cook to prescribe for them sinse our Departure from Tuckerwarner. This is a grate school. We can see human nature in all its forms." On November 24 he made further commentary:

Being Browns apointment to preach I will menshen one of our every day and nights seesns on board the *Arkansas*. We had preaching between decks. Our captain in the forward house abaft the forecastle with a company playing cards. Also a band of Rowdies in the house on deck consisting of Blass and Woodruf of Troy and others playing the bango, tamborren, fidle, boans [bones] and other instrmen of musick with the adishion of negrow songs. The nois the[y] said was in order to drownd the vois of the speaker. The[y] accomplished the end It was designed for. In the forecastle there was singing songs, in the galy dansing, in the Cabin gambling, on the quarter deck prominading. All this I witnessed at one time. This conduct is encouraged by the captain and oficers of the vesel.

On December 16 he described some activities during a worship service, then added his final observation on his fellow passengers:

There was a very good feeling existing amongst the brethering in the shape of acknalaging faults and asking forgiveness of each other as we are nearing our Destined port and probably the last Sunday we shall all be on board together.

The evil that has been comited on board over balanced all the good that has been done during our voige to califonia. It is a lamentable fact that the magarity at this time is sufering a desese contracted to Tuckerwarner and a large number of those desesed is men of famileys. The[y] apiered to be reckles and void of all feer and shame and respect for their famileys to associate with those prostitutes and some of those belonged to the church.³⁷

The *Arkansas* anchored near Bird Island [present day Alcatraz] in San Francisco Bay on December 19, 1849, after a passage of 187 days, twenty-six of which were spent in the ports of Rio de Janeiro and Talcahuano. Ferrell and eleven other passengers decided to go ashore immediately to visit the city of San Francisco, and to see if they had any mail at the post office. They found the lines so long at the post office that it took half a day to work to the head of the line. Impatient miners would pay between \$5 and \$15 to move to the head of the line. The landing party was delayed in returning to the ship by two of the passengers who were late in arriving at the boat. In the meantime, a heavy wind and rain came up, making it difficult for them to reach the *Arkansas*. They feared they would be blown out of the harbor, but fortunately they were able to land their boat on an island near the ship when the wind shifted. After spending a cold and wet night on the island they successfully launched the boat on their second try.

When they approached the *Arkansas* they noted that she had suffered heavy damages to her fore and mizzen masts and to her rudder. When they got on board they learned she was leaking badly, and both the sailors and the passengers had to work the pumps constantly. Captain Shepeard went ashore to find someone to tow the *Arkansas* in. The first price Shepeard was quoted was \$5,000. He later found a man with two or three small steamboats who towed the *Arkansas* about a

mile and a half in two hours for \$1,200.³⁸

Ferrell discontinued his journal with the description of their arrival and the towing of the *Arkansas*. Deane continued his journal into 1851, but described only his activities in the gold fields. As he was not a member of the California Mutual Benefit and Joint Stock Company, he reported nothing further on that group after he arrived in San Francisco. It is impossible to say whether the members of the Association actually established the church they intended to establish in California or if they supported an existing church, but considering what had gone on during the voyage it is probably unlikely that they did either of those things. Most likely the Association

split up very shortly after they arrived in San Francisco. Ferrell had already noted that groups of four to eight were forming to go to the minefields before they arrived at their destination. The long term effect upon the Methodist Church in California of this group that started out with such high objectives is impossible to determine. Reverend William Taylor did mention M. E. Willing, Calvin Lathrop, and James McGowan, three of the passengers in the *Arkansas*, as early Methodist ministers in San Francisco.³⁹

NOTES

1. William Taylor, *California Life Illustrated* (New York: Carlton & Porter, 1860): 52–55, 77–84, 19–25; *Baltimore Sun*, April 12, 1849.

2. The *Andalusia* was advertised in the *Baltimore Sun* as bound for San Francisco as early as February 7, 1849. Her first advertised departure date was March 24, but it was nearly a month later when she actually sailed. The *Andalusia* was built at Baltimore in 1848 by Abrahams & Cooper for William Wilson & Sons. Her dimensions were 151' 4" in length, 33' 5" in breadth, and 16' 8" in depth. She was copper fastened, copper sheathed, and measured 771 tons burthen, and was considered a fast sailing vessel. Her first voyage was to China, where she was engaged in the British tea trade. She made voyages to California in 1849, 1852, and 1853 before being condemned in 1859. Captain F. W. Willson was in command of the ship in 1849 when she carried approximately one hundred passengers, most of whom were from Maryland. Others were from Pennsylvania, Kentucky, Louisiana, and Virginia. She carried a crew of twenty-five. For a full account of the voyage of the *Andalusia* from Baltimore to San

Francisco, see Charles R. Schultz, "Andalusia: Queen of the Baltimore Gold Rush Fleet," *Maryland Historical Magazine* 86 (Summer 1991):150–175.

3. Miss Kimberline and Mrs. A. J. Reed are identified in the *Baltimore Sun* of April 19, 1849, as members of the missionary party. Neither is mentioned by Taylor in *California Life Illustrated*, however. In its listing of the passengers in the *Andalusia*, the *Baltimore American & Commercial Daily Advertiser* of April 19, 1849, the name is given as Kimberlin.

4. Taylor, *California Life Illustrated*, 60; *Baltimore Sun*, April 19 and 25, 1849.

5. Anne Willson Booth, *Journal of a voyage from Baltimore, Maryland, to San Francisco, California in the ship Andalusia under the command of F. W. Willson, April 19–November 6, 1849*. Entries for those Sundays when services were held provide details and Booth's opinions. Bancroft Library, University of California, Berkeley, # C-F 197.

6. Taylor, *California Life Illustrated*, 16–17.

7. Taylor, *California Life Illustrated*, 19–25, 52–55, 60. Anne Willson Booth discussed the birth and naming

of the Taylor infant periodically over a month, during which time she mentioned possible names. On July 12, 1849, she reported Mrs. Taylor had chosen Coriente Willson Taylor for the child and added she thought it was prettier than others that had been proposed such as Oceana, Andalusia, or Atalanta. Campbellites are more properly called Disciples of Christ and were founded by Alexander Campbell in Virginia. Taylor became a rather famous street preacher in California. He described his experiences in detail in his book *Seven Years Preaching in San Francisco, California*.

8. *The Key to the Goodman Encyclopedia of the California Gold Rush Fleet* (San Francisco: The Zamorano Club, 1992); *New York Daily Tribune*, June 27, 1849.
9. *Christian Advocate and Journal* (New York), January 11 and March 8, 1849; *New York Daily Tribune*, January 23, 25, and 30, 1849.
10. *New York Daily Tribune*, January 25 and 30; February 5, 8, 13, 20, and 26; March 20; April 3 and 13, 1849.
11. *Christian Advocate and Journal*, April 5, 1849.
12. *New York Daily Tribune*, April 23, May 4 and 17, June 7 and 27, 1849; Benjamin H. Deane, *Journal, of a voyage from New York to San Francisco in the ship Arkansas under the command of Captain Philip W. Shepeard*, Bancroft Library, University of California, Berkeley, various dates between May 28 and June 26, 1849. Deane was not a member of the California Mutual Benefit and Joint Stock Association.
13. Deane, *Journal*, May 28–June 19, 1849.
14. Deane appears to have been a member of an unnamed company who traveled together. The other members of the group apparently were Silas S. Steward, Danus Dennison, Hiram S. Dennison, Thomas W. Russell, and a Mr. Brownell. They were from Coluaine, Greenfield, and Springfield, Massachusetts. Deane, *Journal*, May 28, 1849.
15. Deane, *Journal*, June 19, 1849.
16. Deane, *Journal*, June 25, 1849; *New York Daily Tribune*, June 27, 1849. The later gives the name of the vessel as *Gallego* rather than *Brutus*.
17. Deane, *Journal*, June 26, 1849; Robert N. Ferrell,

Journal of a voyage from New York to San Francisco in the ship Arkansas under the command of Captain Phillip W. Shepeard, June 26–December 19, 1849, Bancroft Library, University of California, Berkeley, June 26, 1849. The Bancroft also has a photocopy of the journal, as do the Peabody Essex Museum in Salem, Massachusetts, and the California Historical Society in San Francisco. Ferrell was a member of the Association. Why he did not record the pre-departure activities of the California Mutual Benefit and Joint Stock Association in his journal is a mystery. It would have been good to have his perspective as an insider in addition to that of the non-member Deane.

18. *New York Daily Tribune*, June 27, 1849. Eight adult females was an unusually large number in one vessel. Females accounted for about one percent of those who sailed around Cape Horn to California in 1849.
19. Ferrell, *Journal*, July 5–6, 1849; Deane, *Journal*, July 5 and 6, 1849. It should be noted that one of the rules of the Association was that there was to be no alcohol taken on board the ship, yet passenger Griffith had some, and it was openly sold to another passenger. Deaths and subsequent burials at sea were particularly distressing to families of the deceased, as they would never be able to visit the site of the burial as they could when burials were on land. In this case, Griffith's relatives would likely not know of their loved one's death for many months and would never know exactly where the death occurred.
20. Ferrell, *Journal*, September 23, 1849. Deane noted the cook's death on the same day and speculated a fit was the cause of death. He said nothing of the cook's having been given alcohol, but did note he had been sick for several days.
21. Ferrell, *Journal*, September 24 and October 5, 1849; Deane, *Journal*, September 20–24, 1849.
22. Deane, *Journal*, and Ferrell, *Journal*, all Sundays between July 1 and December 23, 1849. While they were in Rio de Janeiro, many of the passengers took long walks in the city and the surrounding area. Deane reported that the birth of Captain Shepeard's daughter on October 3 "was hailed with much joy." Ferrell reported it on October 5 and added that the "American coulers was hoisted to the mast head."

Serious gambling such as is hinted by Ferrell was rare on California-bound vessels in 1849. There were occasional lotteries in some vessels, and passengers frequently made small bets on the number of miles sailed in a day or the length of time that would pass before they reached a particular destination.

23. Deane, *Journal*, July 3 and 4, 1849; Ferrell, *Journal*, July 4, 1849. Ferrell's entry is actually quite brief. His account differs slightly from that of Deane from which most of the paragraph was taken. Ferrell reported that Dr. Randle read the Declaration of Independence, Calvin Lathrop gave the prayer, a lawyer named Buston [possibly Lewis M. Burson of Stroudsburg, Pennsylvania, a member of the Board of Directors] gave the extemporaneous oration, and Mr. Rev. James McGowan presented the closing oration. It may well be that Randle did read the Declaration of Independence along with performing other duties as presiding officer for the day. Reading of the Declaration of Independence occurred regularly on board California-bound vessels in which Fourth of July celebrations were held. All of the other activities on board the *Arkansas* were also common to most 1849 gold rush sailing vessels. They typically had thirteen "national" toasts by a committee and as many "volunteer" toasts as passengers were willing to offer. Excessive drinking on July 4 was fairly common on these vessels.

24. Deane, *Journal*, November 22, 23, 27, 28, 29, 1849; Ferrell, *Journal*, November 29, 1849.

25. Deane, *Journal*, July 1 and 18, August 14, September 1 and 7, November 24, 1849; Ferrell, *Journal*, June 28, July 15 and 18, August 10, September 21, October 9, November 30, December 6, 1849. Exactly what Deane meant by "chinkings" [The best transcription I was able to make] has not been determined. Since Deane combined it with plantains, they were likely a similar type of fruit or vegetable. The significance of "Butter on Sausages" is also unknown. There were a variety of ways to cook lobscoose, which is a generic term for stew. The ingredients often depended upon what was available, but generally they included potatoes, hard navy bread broken up and soaked, onions, small pieces of salt pork or salt beef,

seasoning, grease skimmed from the cooking pots in which beef and pork were boiled, and a thickening agent such as flour. All of this was boiled together in fresh (as opposed to salt) water in a large pot. The ingredients for duff, sometimes referred to as plum duff, also depended upon what was available, but it generally consisted of flour, fresh water, grease from the cooking pots or occasionally butter, salaratus (a nineteenth-century name for baking soda), raisins (sometimes dried apples or perhaps plums), and seasoning (nutmeg and/or cloves) all mixed together and placed in a heavy canvas bag and boiled in salt water for two hours or more. The finished product was sliced and sometimes was served with a sauce made of sugar, water, and lemon juice or with molasses as sweeteners. Duff was commonly considered a treat. Ferrell is generally correct in asserting that at sea the captain held complete power over the ship and everyone on board. Since Captain Shepeard appears to have been an employee of the Association which owned the *Arkansas*, he should not really have had the control over food that Ferrell assigned to him. Of course, since Shepeard had such control in other vessels he had commanded, he may well have simply assumed it in the *Arkansas*; or the leaders of the Association may have allowed him to assume that power because of their lack of experience in running a business such as the California Mutual Benefit and Joint Stock Association.

26. Ferrell, *Journal*, September 9, 12, and 17, 1849; Deane, *Journal*, July 17, 25, 26, and 30, August 10, September 8, 13, 15, and 18, October 29, 1849.

27. Deane, *Journal*, August 6, 1849. Bacchus is the god of wine and grape growing.

28. Ferrell, *Journal*, August 19, 1849. He summarized the entire eighteen day stay under this date.

29. Deane, *Journal*, daily entries between August 19 and September 4, 1849.

30. Ferrell, *Journal*, September 25–October 30, 1849.

31. Deane, *Journal*, October 30–November 7, 1849.

32. Ferrell, *Journal*, October 30, November 3 and 4, 1849.

33. Ferrell, *Journal*, December 1, 1849. It was a common practice to attach strips of wood to the edges of

tables in sailing vessels to keep dishes from sliding off the edges of the tables as the vessel pitched and rolled to one side or the other because of the wind or waves.

34. Ferrell, *Journal*, December 5 and 6, 1849; Deane, *Journal*, December 5, 1849.

35. Ferrell, *Journal*, December 6, 1849.

36. Deane, *Journal*, November 19, 21, and 22, December 14, 1849; Ferrell, undated entry between November 21 and 24, 1849.

37. Ferrell, *Journal*, Undated entry between November 21 and 14, November 24, December 16, 1849. He brought some serious charges against his fellow association members, and there is no reason to believe that they were in any way false. The passengers in the *Arkansas* were not alone in associating with the women of Talcahuano. Ferrell suggests this when he noted those women favored Americans. Some journalists in other vessels also took fellow passengers to

task for their indiscretions on shore, but few of them were as frank in their descriptions of the consequences or as condemning as was Ferrell. It would have been good if he had been equally frank and more consistent in writing about other activities of a more positive nature during the voyage.

38. Ferrell, *Journal*, December 19, 1849.

39. Taylor, *California Life Illustrated*, 87-97. According to the Journal of the Fourteenth Annual Session of the California-Pacific Annual Conference of the United Methodist Church, June 17-21, 1998, there were then between 195,000 and 200,000 Methodists in California. Thus it would seem that the early missionary work of men like William Taylor, M. E. Willing, Calvin Lathrop, James McGowan, William Roberts, and Isaac Owen, as well as some of the passengers in the *Arkansas*, bore fruit in the growth of Methodism in California.

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THE HISTORY OF U.S. LAW AND JURIDICAL RULINGS THAT DIFFERENTIATED “PUBLIC VESSEL SEAMEN” FROM MERCHANT MARINE SEAMEN

by Charles Dana Gibson

Two categories of character change can take place which remove a merchant ship from the peaceful identification normally applicable to the pursuits of a ship engaged in the nation's commerce. The first category is when a merchant ship, either private or government owned, operates on behalf of its government during a period of hostilities. The second, and most altering, is attained when a merchant ship operates (especially if armed) in conformity with the warlike purpose of the nation and is under authority to do so. An extenuating criterion to that condition would be that the ship's gunners have been authorized to initiate fire against the enemy—that is, without waiting to be attacked before opening hostile action of their own. Such a ship, by that last circumstance, effectively becomes “a ship of war.”

Having become a “ship of war” does not necessarily mean that such a ship loses her identity as

a “merchant vessel” nor does it necessarily mean that crewmembers lose their status as “merchant seamen.” World War II gives the best example of this. During the early part of World War II, following the beginning of nationalization of the United States merchant marine in April of 1942, the seagoing personnel were considered as having become “employees of the United States,” since in the majority of cases the ships they sailed were operated by agents under the contractual employ of the War Shipping Administration. The federalized condition did not alter the seaman's basic identity as a merchant mariner, for the ships remained under the laws and regulations governing merchant vessels of the United States. It did initially evoke a quasi-status where, in addition to merchant seamen's rights and privileges, the mariner was also encompassed under federal benefits normally granted only to seamen serving on “public vessels.” Temporary legislation would be drafted to change that multiplicity; that would not occur until March of 1943 through an Act of Congress. For a ship's crew to part company from the status of being merchant seamen, it must first undergo a transformation which under law removes it from being subject to the statutes governing the merchant marine.

Charles Dana Gibson is the author of seven books dealing with American maritime history. His most recent book is *The Broadbill Swordfishery of the Northwest Atlantic: An Economic and Natural History*.

Under United States law, a clear distinction exists between the statutes governing merchant seamen and merchant ships and the statutes governing public vessels and their crews when such ships are being operated by the military. The body of law developed over time which makes up this distinction was reviewed and thoroughly discussed in a U.S. Supreme Court certiorari delivered on May 26, 1952. The Supreme Court had before it two separate cases, namely Case 401, *Johansen v. United States*, and Case 414, *Mandel v. United States*. Case 401 involved Johansen, an army civilian seaman injured aboard ship in 1949. He had attempted to sue the government under the rights enjoyed by merchant seamen. A Court of Appeals (Second Circuit) had upheld the government in denying Johansen the right to sue. Case 414 involved the death in 1944 of Assistant Engineer Robert W. Dillehay whose ship, the U.S. Army tug *LT-221*, struck a mine on October 15 of that year while attempting to enter the harbor of Cagliari, Sardinia.¹ Following the war, Dillehay's heir (Mandel) made claim against the government on the basis that the deceased was a merchant seaman entitled to the fiscal rights inherent to that occupational calling. (Under U.S. law, the rights of merchant seamen include the avenue to sue and recover from the vessel's owner.) A lower District Court had overruled the government's motion to dismiss petitioner Mandel's suit for damages; however, as in the case of the Johansen suit, a Court of Appeals (Third Circuit) reversed that lower court's decision.

In its determinations leading to the certiorari of Cases 401 and 414, the Supreme Court determined that neither Johansen nor Dillehay were serving on merchant ships at the time of their respective injuries or deaths, and that they therefore were not merchant seamen, being instead "public vessel seamen." In making the joint certiorari, the Supreme Court cited a series of laws and juridical rulings dating back to the late nineteenth century. A review of those statutes as well as those past juridical rulings, all of which pre-

ceded cases 401 and 414 can be helpful in understanding how the difference in identification between the two groups of seamen had come to be established.

In 1890, and later in 1917, the federal courts indicated their understanding of the difference between merchant marine ships and their crews as against "public vessels" and their crews. Up to that time, no body of law had clearly spelled out the distinction.

Merchant Seamen in this title [Title 46, USC, Ed.] simply means seamen in private vessels as distinguished from seamen in the Navy or public vessels, and seamen employed on private vessels of all nations are "merchant seamen" and literally included in this phrase.²

Prior to World War I it had been generally recognized in the United States that ships belonging to the U.S. government were all "public ships," and therefore held exempt from the laws and regulations governing "merchant ships." On June 17, 1917, this understanding was partially reversed, albeit temporarily, by presidential order applicable to merchant ships requisitioned under the authority of the Shipping Act of 1916. The presidential order was explicit in continuing exemptions to those vessels in the service of the army or navy. It appears that the Presidential Order of 1917, as issued under the authority of the then extant War Powers Acts, was the first distinction made during World War I which separated publicly owned and/or publicly operated merchant ships and their crews from those ships of the civilian-manned military and naval auxiliary services. The 1917 order stated that requisitioned merchant ships:

shall not have the status of a public ship and shall be subject to all laws and regulations governing merchant vessels. When, however, the requisitioned vessel is engaged in the service of the War or Navy

Departments, the vessel shall have the status of a public ship and the masters, officers, and crew should become the immediate employees and agents of the United States with all the rights and duties of such, the vessel passing completely into the possession of the masters, officers, and crew absolutely under the control of the United States.³

On October 25, 1919, Congress made permanent the spirit of the Presidential Order of 1917 by legislating that all "public vessels," other than those owned or under the demise (bareboat charter) control of the army or navy, were to come within the purview of the U.S. Navigation and Inspection Laws which are presently encompassed within Title 46 of the U.S. Code.⁴ Title 46 sets the governing authority under which the ships of the United States merchant marine and their officers and crews are regulated, and under which non-judicial punishment is applied by the master toward the goal of maintaining of shipboard discipline.⁵

Following Congress's Act of October 25, 1919, the only vessels which were not governed by Title 46, USC, were ships commissioned as naval vessels, ships of the Army Mineplanter Service, and ships operated as auxiliaries of the army or navy.⁶ On auxiliary ships of the army, the law that applied to the discipline of their civilian crews could be imposed under the Articles of War. However, this was a method rarely invoked in peacetime, as the master's non-judicial authority and the criminal statutes were considered adequate toward enforcing discipline.⁷

Part of the legislated authority which governed merchant seamen—but not "public vessel seamen" of the army or navy—was consular authority, which is applicable within terrestrial areas outside of U.S. jurisdiction. An opinion rendered in 1919 by the Judge Advocate General of the Army and quoted within a digest of Army legal policies published in 1942 makes a distinc-

tion in that particular regard between merchant seamen and "public vessel seamen":

A consular officer of the United States has no jurisdiction whatsoever over the members of the crew of Army chartered transports or tugs, either when a member is under arrest or under confinement by direction of the master, or when in service on board vessel; and the master of an Army chartered transport or tug is not required in a foreign port to discharge or ship its crew before a consular officer.⁸

During the year following the United States's entry into World War II, an issue arose over merchant seamen's status as that status was applied to those seamen employed on government-owned vessels that were operated either directly by a civilian agency of the government or under management contract agreements on behalf of a civilian arm of the government. In the 1930s a number of American merchant seamen became employed upon ships belonging to and operated by the U.S. Maritime Commission, the crews being classed as civil service personnel. Starting in early 1942 the Maritime Commission's offshoot agency, the War Shipping Administration (WSA) took over the Maritime Commission's former ship operations. Seamen employed by the Maritime Commission then became hirees of WSA, either directly or indirectly through private agents designated by WSA and which operated under various forms of management contracts undertaken between those agents and WSA. In either case, the seamen so engaged would have been acknowledged as "employees of the United States." As a consequence, they came under the Federal Employees Compensation Act (FECA) and the Civil Service Retirement Act. In April 1942 the War Shipping Administration, under authority of a presidential proclamation, began the wholesale nationalization of the American merchant marine.

By midsummer of 1942 WSA ship requisitions had been so widely applied that the overwhelming majority of U.S. merchant ships had been placed under federal operation—their crews having become employees of the United States. Congress, apparently anticipating a huge post-war FECA disability pension debt, the result of the mounting dead and disabled seamen caused by enemy action and industrial accidents, drafted a remedial law to become known as the Clarification Act. This law was Public Law 17 of March 24, 1943. The Clarification Act removed officers and seamen directly employed through the War Shipping Administration program from the status of being "employees of the United States," effectively eliminating such persons from the benefits of FECA as well as from the ability to earn civil service retirement credits.

The Clarification Act remained in force for the period of the war, but was automatically revoked following the war with the termination of other War Powers Acts. The Senate Report which had accompanied the introduction of the 1943 Clarification Act [Report No. 62, 78th Congress, 1st Session, Senate] gave, as one justification for the law, that "Present day operating conditions often make uncertain in some cases whether a vessel is a merchant or 'public vessel.'" With passage of the Clarification Act in March of 1943, that uncertainty was removed as henceforth all seamen who were employed either directly by WSA or through agency operating agreements were to be considered in the same category as if they were "employed on a privately owned and operated American vessel."

A purported benefit of the 1943 Clarification Act was that seamen on civilian ships would once again attain the right to sue and recover for personal damages, a benefit not granted to employees on "public vessels." This looked good to the minds of union lobbyists, who had feared the "employees of the United States" status of their members as being potentially destructive to the unions' post-war role in the shipping industry. In

reality, the merchant mariner's privilege to sue and recover damages was soon negated through the government's War Risk Insurance. The Maritime War Emergency Board, which administered War Risk Insurance, began ruling in almost every case that the cause of injury or death to seamen was considered war risk.⁹ Collision, for instance, usually occurring either in blackout conditions or in a crowded harbor, was an event deemed by the Maritime War Emergency Board as being attributable to war conditions. The same reasoning began to apply to what in peacetime would be ordinary industrial accidents. The rules of negligence and unseaworthy conditions were no longer being applied. For the wartime seaman or his heirs, the only realistic option was acceptance of the Maritime War Emergency Board's award of the War Risk Insurance. For death, that award was limited to \$5,000.

Civilian seamen employed upon vessels of the United States Army or Navy as "public vessel seamen" were not addressed by the 1943 Clarification Act, nor (according to the study of the matter made in 1952 by the Supreme Court concerning Case No. 401, *Johansen v. United States*) was it applicable in any way to civilians employed upon military-operated vessels.¹⁰ The Clarification Act had applied solely to those seamen employed by the government on ships owned by or requisitioned by the War Shipping Administration, or by other government civilian agencies, or by private companies. Its language is clear in that all crewmembers on privately owned ships, as well as on WSA owned and/or operated ships, or those private ships operated under WSA agency agreements, were in the "merchant marine" and therefore were "merchant seamen." Left out of the descriptive term "merchant marine" were those ships owned by the army and/or operated under demise (bareboat) charter by the army. These continued to be considered "public vessels," and their crews "public vessel seamen." The Supreme Court in *Johansen v. United States* chose to use this difference in status as one of the primary

arguments for its certiorari in both Case 401 and Case 414.

The Court had concluded that the right to sue and recover was never made applicable to "public vessel seamen." In writing up the *Johansen* case, the Court further stated this when discussing the Public Vessel Act of 1925. It cited the two cases of *American Stevedores, Inc. v. Porello*, 330, U.S. 446 and *Canadian Aviator Ltd. v. United States*, 324, U.S. 215. These were cases where non civil service crews were employed. The Courts had held that suits for damages were allowable; however, if crewmembers were held to be "employees of the United States," then bringing suit would not be allowed. Under the Public Vessel Act of 1925, the Court's argument emphasized that "public vessel" employees had never actually been legislatively granted the right to sue and recover.

The Supreme Court also argued in its certiorari for *Johansen* that the Suit in Admiralty Act of 1920 gave a broad remedy to seamen on United States merchant vessels, but did not extend the benefits of that coverage to "public vessel seamen."¹¹ The Court commented that an extension of such coverage to "public vessel seamen" had been proposed in Congress but had been defeated. The Supreme Court made the point, on page 440 of its Opinion, that the government had established a uniform compensation for "injuries or death for those in armed services." It later explained that "duties and obligations of civilian and military members of a crew of a public vessel are much the same." This same rationale had been emphatically stated within the opinion of the Court of Appeals in *Mandel v. United States*. The Court of Appeals was quoted by the Solicitor General to have reasoned in the following decisive manner:

The typical makeup of the personnel of public vessels is a crew of employees some of whom are in the Armed Forces, some of whom are civilians. They are all said to be

subject to the same discipline while engaged in the particular voyage.

Having said this, the Court of Appeals had then further reinforced its position:

The Second Circuit has twice concluded that the military components of the crews of public vessels cannot sue.

In like manner, the Court of Appeals had denied to the civilian crewman plaintiff [*Mandel v. United States*] the right to sue. In the hearing for that case as it was argued before the Supreme Court, the Solicitor General had put the matter quite simply:

Military authorities have absolute power of control, enforced by rigorous sanctions over the civil service crew-members no less than those of the military component.¹²

The history of U.S. law and government policy shows a clear distinction between "public vessel seamen" and "merchant seamen." This began with the Presidential Order of 1917 and was made legislative in its nature by Congress in 1919. It was carried through in the Admiralty Act of 1920 and again with the Clarification Act of March 24, 1943 [Public Law 17]. A juridical understanding of the identification of the two seamen groups, as being separate and apart from each other, was comprehensively endorsed by the certiorari of the United States Supreme Court in the cases of *Johansen* and *Mandel* as decided on May 26, 1952.

From the diplomatic viewpoint, although not directly germane to the decisions arrived at in the cases of *Johansen* or *Mandel*, it is interesting to look at the subject of "public ships" as it was viewed under international law during the first decade of the twentieth century.

The legal status of U.S. Army transports became a subject of controversy during 1900, when the matter arose at a number of foreign

locations. One such place was Nagasaki, Japan, near a coaling depot that had been established by the U.S. Army Quartermaster Department. Army transports routing to the Philippines following the Spanish surrender at Manila were stopping at Japan for coal. Nagasaki was also used as a recoal-ing stop for those transports in support of the American participation with the "International Column" engaged in the relief of Peking. Japanese port officials claimed that the army transports coaling there were subject to the same duties normally made applicable to merchant ships. The army officer who had been detailed as the resident depot quartermaster protested, but with little success. During one such replenishment, a crewmember aboard the USAT *Thomas* assaulted a Japanese national who was aboard that transport engaged in stowing coal. The Japanese police wanted to arrest the seaman, but the attempt was resisted by the depot quartermaster and backed by the American Consul. The Consul took the case before the Japanese Imperial government and obtained a ruling that army transports had the full status of public vessels, being entitled to the same immunities and privileges of vessels of war belonging to nations in amity as that status is recognized in international law.¹³ The Japanese ruling not only exempted the seaman from local justice, but it served to settle the question of port duties as well.

The issue over the status of military transports had also arisen in Hong Kong. In that situ-

ation, acting under U.S. Army instructions, the master of SS *Ohio*, time chartered to the army, refused to pay British harbor dues and other levies normally imposed against merchant ships but not against vessels of war. He argued that his ship was a public vessel and was therefore immune from such charges. The British governor's office informed American authorities that the ship would not be billed if it was determined that United States law entitled the ship with the status of a public vessel. The army forwarded the question to the U.S. State Department, which passed it along to the Treasury Department for review. The ruling given was that time-chartered merchant ships were not entitled in the United States to public vessel status in the same manner as were ships belonging to or being directly operated by the army or the navy. The British authorities at Hong Kong accepted that ruling. Thereafter, the army's own ships or those under its demise charter were held free of Hong Kong's port charges; however, those transports under time charter and which were being operated by shipping companies were charged.¹⁴

Another country was heard from on the issue when the Khedive of Egypt granted immunity as a public vessel to any ship (apparently whether directly operated by the military or under time charter to the military) provided its cargo consisted entirely of military materiel not intended to be channeled into commercial markets.¹⁵

NOTES

1. In 1998 Italian divers found the wreck of a large tug off the harbor of Cagliari, Sardinia. According to correspondence from the diver to the H. Lee White Maritime Museum in Oswego, New York, artifacts recovered from the wreck identified it as the USAT

LT-221.

2. *U.S. v. Sullivan*, C.C. Or. 1890, 43 F602. See also *Scharrenberg v. Dollar SS Company*, Cal 1917, 38 S.Ct.28, 245 US 122, 62 L.Ed. 189.

3. *International Law Situations* (Newport, R.I.: Naval

War College, 1930), 49

4. c. 82, 41 Stat. 35—Laws of 1919. This statute was continued under recodification by the Acts of June 10, 1933, and June 29, 1936. Under the 1950 reorganization plan No. 21 §305 and §306, 15 F. R. 3178, 64 Stat. 1277, the language then and now within Title 46 §363 states:

All steam vessels owned or operated by the Department of Commerce, or any corporation organized or controlled by it should be subject to all the provisions of Title 52 of the Revised Statutes for the regulation of steam vessels and acts amendatory thereof or supplemental thereto.

The National Oceanic and Atmospheric Administration (NOAA), which maintains a fleet of survey and research vessels, is a subagency to the Department of Commerce; NOAA vessels (and its predecessor U.S. Coast and Geodetic Survey) operated under the same Inspection and Licensing laws (Title 46) which are applicable to the ships and seamen of the merchant marine.

5. During World War II, beginning in early 1943, merchant seamen serving on both private ships and WSA ships in war zones were placed—at least technically—under a limited scope of military and naval justice; however, this did not preclude or alter the civil authority of a master to impose non-judicial punishment under the authority allowed him by Title 46, USC.

6. As a practice, the Army Transport Service availed itself, through interagency agreement, of the services of the Steamboat Inspection Service, Department of Commerce, by asking that agency to conduct the same annual safety inspections of army ships mandated under law (Title 46) for merchant ships. The army—at least for its large tonnage vessels—also made a general practice of employing and upgrading its officers on the basis of licenses issued by the Steamboat Inspection Service. The army was able to run its fleet without its own separate inspection service but at the same time run it in conformity with various international safety-at-sea standards to which the

United States was signatory.

7. The crews of the Army Transport Service were civilians. Shipboard disciplinary measures as exercised by the ship masters generally followed the format as set by Title 46, USC; however, this discipline was not imposed under the authority of that Title. Instead, it was applied under the authority of stated army regulations drafted specific to the Army Transport Service.

8. 230.821 (*Opinion of the Judge Advocate General of the Army*) Feb. 28, 1919. *Digest of Opinions of the Judge Advocate General of the Army, 1912–1940* (U.S. Government Printing Office, 1942).

9. The Maritime War Emergency Board was a joint agency of the War Shipping Administration and the Department of Labor. This agency, in addition to administering War Risk Insurance, established merchant marine base pay rates, war zone bonuses, attack bonuses, and related agenda.

10. During the early part of World War II there were probably around a dozen vessels (cargo ships and at least one salvage tug) operated by the navy's Naval Transport Service (NTS) with civilian crews. These were classed as "public vessels" in the same sense as were army transports.

11. 41 Stat 525, 46 USC § 742

12. Brief for the United States, Cases 401 and 414, in the Supreme Court of the United States, October term 1951, 39. Within 191 *Federal Reporter*, 2nd Series, *Mandel v. United States*, No. 10385, 167, 168.

13. Depot QM, Nagasaki, Letter to Chief QM Div. Philippines, August 16, 1900, from QMG file 156930; American Consul Nagasaki, Letter to Depot QM, Nagasaki, August 15, 1900, from QMG file 156930.

14. American Consul General Hong Kong, Cable 149, to the Honorable David J. Hill, December 2, 1899, QMG file 146801; Secretary of the Treasury Letter to Secretary of State, January 22, 1900, QMG file 146801.

15. Secretary of State Letter to Secretary of War, December 7, 1900, from Secretary of War file 4500. At this time, ships chartered by the army on the United States East Coast were being routed to Pacific service via the Mediterranean and the Suez Canal.

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HUNTING SUBMARINES IN THE ENGLISH CHANNEL, 1918:

EXCERPTS FROM AN ACCOUNT BY CHARLES KANE COBB JR.
(1888–1968)

edited by Charles K. Cobb

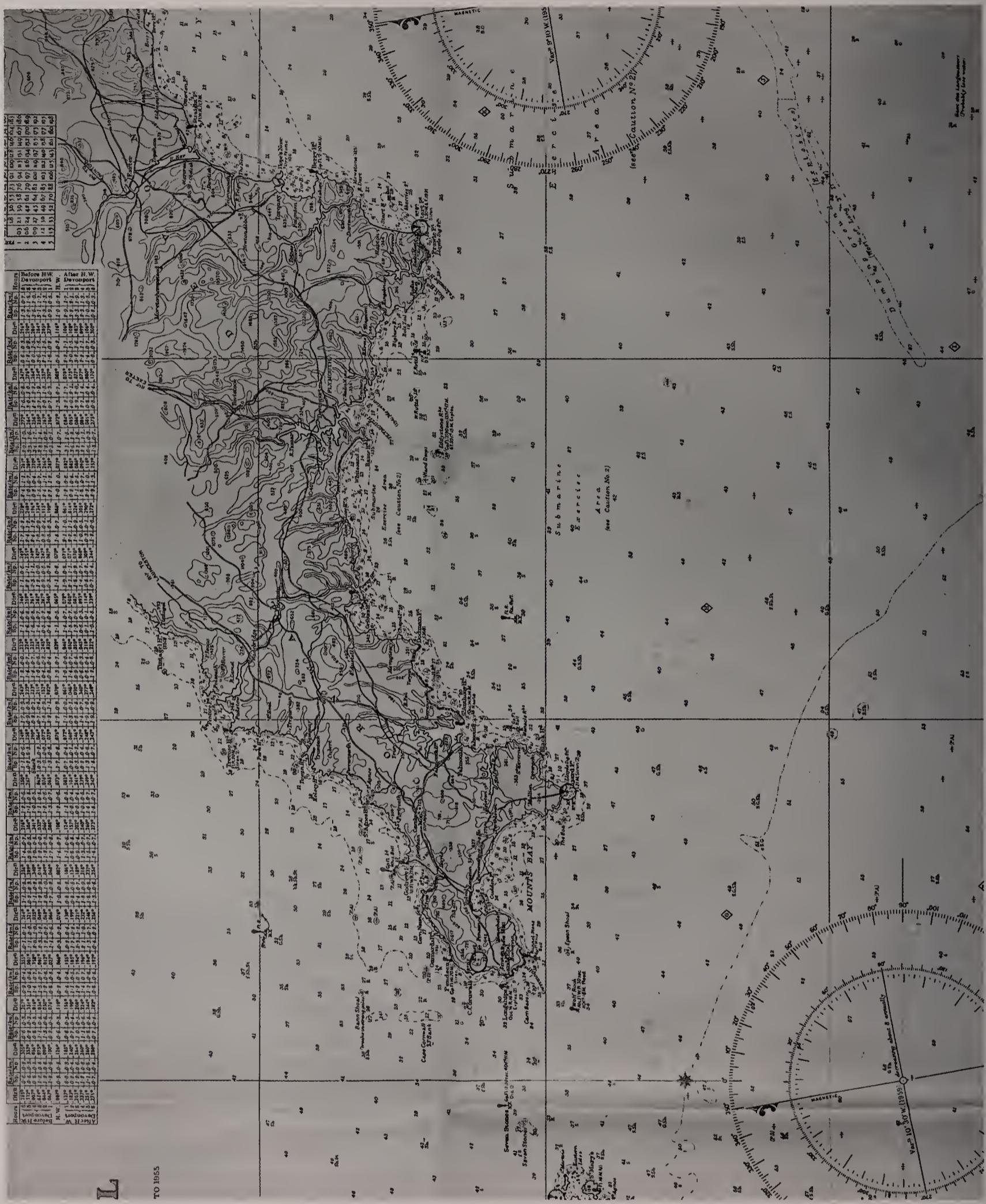
On April 6, 1917, the United States declared war on Germany, partly in response to that country's declaration of unrestricted submarine warfare against Allied shipping wherever found, including United States merchant vessels. The Navy Department immediately ordered the building of a fleet of small vessels designed and equipped to track down and sink submarines. Charles Kane Cobb Jr., Lieutenant USN, commanded one of these vessels, SC-35, and led units of three similar vessels in submarine hunts in the English Channel in 1918. After the war he hammered out an account of his experiences on a Smith-Corona portable typewriter and had it bound for posterity. Last year I had copies made for his descendants and deposited one in the

Phillips Library of the Peabody Essex Museum in Salem, Massachusetts (#99-165).

My father was born in Boston and was educated at Noble and Greenough School, Harvard College, and the Harvard Business School. Before the war he bought wool in South America for a Boston firm. He was commissioned in the Naval Reserve after attending summer school at the Naval Academy in 1915 but transferred to the regular navy after the United States entered the war. Although he qualified as a second mate in the merchant service, he returned to the wool business instead, buying wool in the western United States until 1927, when the wool business became depressed. He spent the rest of his career as an investment counselor.

His interest in the sea began early with family cruises on the Maine coast. In the early 1900s the family owned part of a coasting schooner that had been converted for cruising. It had a large deckhouse amidships and was fully equipped with the wicker furniture common in summer houses in those days. He continued to sail the Maine coast between the wars, and he was an early member of the Cruising Club of America.

Charles K. Cobb, son of Charles K. Cobb Jr., is a retired lawyer living in Ipswich, Massachusetts. He was discharged as a Lieutenant (j.g.) USNR in 1946 after service as a communication watch officer with U.S. Naval Group China outside of Chungking and with U.S. Naval Port Facilities Shanghai.



Detail of chart of western English Channel (C3642). Courtesy of the Peabody Essex Museum, Salem, Massachusetts.



Detail of chart of western English Channel (C2649). Courtesy of the Peabody Essex Museum, Salem, Massachusetts.

To fit his account within an issue of this journal, I have edited it drastically, omitting the descriptions of the newly built chasers; their fitting out at New London, Connecticut, in the winter of 1918; their passage across the Atlantic to Bermuda, the Azores, and Brest; crossing the English Channel to Plymouth the first week in June 1918; and training operations out of Plymouth. The edited account starts with submarine patrols at the western end of the English Channel in August.

The photograph of the chart of the western portion of the English Channel and the coast of Cornwall appears courtesy of the Peabody Essex Museum. Photographs and plans of submarine chasers are courtesy of the U.S. Navy Department. The portrait of Charles Kane Cobb Jr. is copied from a photograph in my possession.



Up to this time chasers had made several attacks on sounds fixed by hydrophones, and many supposed contacts had been made and lost without attacking. Nevertheless, Commander [T. G.] Ellyson [USN, in charge of subchaser operations from the mother ship USS *Hannibal*] believed that only once had chasers heard a submarine, and the chances are he was right. But the old system of patrols had served a useful purpose in giving the listeners excellent training in detecting the sounds of different types of vessels. They would not have gotten it offshore, where seldom anything was heard on the tubes. It was supplemented with training in listening for British and American submarines under all conditions—submerged, on the surface, charging batteries, pumping and blowing tanks, etc. The knowledge acquired by the officers and crew of the performance of materiel, methods of operating, communications, development of organization and routine, and general service conditions was also most valuable. We were pioneers in the development of a new offensive weapon, as yet

untried and unproved, against the submarine, involving countless problems which could be solved only by the efforts and initiatives of us officers afloat.

The first week of August . . . the old method of stationing units here and there on various limited patrol lines off strategic points of the coast was abandoned in favor of sending out two or more units together, usually with a destroyer, as one hunting force on what was officially designated as a hunt and assigning it to an extended operating area further offshore. The main reason for this change was that the submarines had ceased to operate close inshore. Occasionally, but rarely, one of the smaller subs would lay some mines or sink a ship in the Channel. Although most of the time there would usually be one of these subs somewhere in the Channel, he never did much damage and was pretty well looked after by the British patrols. The big U-boats on which Germany placed her main reliance operated well offshore to the westward, in the track of the troop convoys and other main . . . routes.



The principal factor in reducing the range of listening devices was the weather. With the wind blowing force four or above for any length of time, listening becomes practically impossible except with the unreliable K tube. In a smooth sea we had heard destroyers up to twelve or fifteen miles on all tubes. I have lost contact with a submarine running submerged at five knots within a mile, even in smooth water. The electric motors of submarines are very quiet compared with the engines of a destroyer. Submarines had also developed "silent running" on one motor at a speed of 1.5 to 2 knots, at which they were practically inaudible. This was demonstrated to me one day while anchored in Whitsand Bay for listening training when the periscope of the USS *AL2* went by within three hundred yards without our hearing her motors—a most discouraging perform-



Charles Kane Cobb Jr. as a lieutenant in the United States Navy, 1918. Courtesy of Charles K. Cobb.

ance. The Germans practiced this silent running in their drills at Kiel, and it formed their most effective counter-weapon against our sound-detecting devices. Whether it did not upset our whole doctrine of the chase was a serious question. Submarines could hear us as well as or better than we could hear them. If a submarine commander could immediately slow his motors to silent speed as soon as he heard the propellers of other vessels, he was pretty likely to elude pursuit. Our only course in that case would be to lie motionless and hope he would come within attacking range or, failing that, to attack regardless of distance immediately after obtaining his general course from two successive fixes. My experience so far—and no one could say that I had not had contact with a submarine—support-

ed this theory. Nevertheless, in the Adriatic a chase and attack had been successfully carried out according to our official principles, in which the sub had been distinctly heard at all times. The "doctrine" was allowed to stand, a decision which was seemingly justified later by Unit 4's following of a U-boat for 2½ hours by sound alone. I am unable to account for the seeming contradiction, except that it was not always possible to run silently, or that German commanders held divergent opinions on the best tactics to use when being chased by hydrophone vessels.

So much for the chase. The attack also presented problems, the first being what was the proper depth at which to set depth charges for explosion. According to the official pamphlet of the Bureau of Ordnance, a 300-pound depth charge would cause serious damage to a submarine, certainly if it exploded within seventy feet of its hull and probably if it exploded within 150 feet. This was fairly optimistic. It is doubtful that a submarine would be destroyed unless the explosion occurred within a much shorter distance. We were originally instructed to set at the maximum depth, 150 feet, but later this was reduced to fifty feet when it was learned from interrogating survivors of German undersea boats and other sources that they usually traveled at periscope depth, even when trying to escape attack. Before the Admiralty would acknowledge proof of a claim of having sunk a submarine, very substantial evidence had to be produced. The appearance of oil and debris on the spot bombed was by no means conclusive. In an extraordinary number of cases submarines which have gone down stern first or on their sides, apparently surely destroyed, managed to return to base or even to continue operating. Newspaper accounts of the ease with which the gun crew of a transport or a single depth bomb from a destroyer disposed of a German U-boat are ridiculous in the extreme.

In the "operations room" at base headquarters was a chart with pins showing the positions of all submarines reported and a book giving the date,

source, and circumstances of each. The reports came from SOS messages, "ALLO" messages of submarines sighted by merchant steamers, sound contacts, wireless directional fixes, reports from aircraft, etc. Information also came from the British Secret Service, whose work was wonderful. How they got their information I do not know, but they seemed to know whenever a submarine departed from or returned to Germany, and these reports either substantiated or refuted many claims of sinkings of subs. Numerous pamphlets, mostly confidential or secret, were on file for perusal by officers. Before going out on an operation the "Hunt Commander," usually either the captain of the leading destroyer, or the senior chaser officer, would put himself in possession of all information then at his disposal. For further information at sea, he would have to depend on intercepted radio transmissions or messages broadcast by land stations to "all allied patrol vessels." Radio operators were required to decode all messages picked up and report them to the officer of the deck. They had the hardest job in the whole crew, standing their watch-and-watch, sitting four hours at a time in a confined space holding on against the rolling and pitching of the vessel, breathing engine room fumes which always pervaded the radio shack and the officers' quarters when jumping into a head sea.

Our first hunt under the new plan was from August 12 through 16, with four units of chasers and the destroyer *Aylwin* in support. The area assigned was west of the Scilly Isles, from longitude $6^{\circ} 40'$ West to 8° West, farther from base and farther off shore than previous operations. The formation was all units in line bearing north and south true, abreast on the east and west courses which we held at all times, five miles between units, with the *Aylwin* five to ten miles in the rear of the line. The entire force would thus sweep an area twenty-five miles wide. All boats stopped to listen and got under way together according to a schedule, changed at noon each day, allowing for three silent periods of five minutes each per hour.

Running hunt was used in the daytime, drifting hunt at night, both commenced on signal from the Hunt Commander. Any unit making contact was to hoist its hearing flag, large—black, and unmistakable at a distance—at the truck and begin to chase, notifying the other units by radio as soon as possible so that they could keep clear and not create interference.

We all stood out in column to a point twenty miles south of Eddystone, then assumed hunt formation and proceeded to the area. The units that we were relieving had run into some very dirty weather and had a pretty lively dusting, but it was again our good fortune to strike it moderate. After dropping the lights of the Scillies until picking them up again on our return, we were at all times out of sight of land—quite different from our previous cruises. This kept me busy taking sights, which I have always enjoyed; aside from keeping station in formation, that was about all there was to do. Nothing was heard on the tubes except the *Aylwin* as she cruised around at night while we drifted and two or three convoys. A blimp from the air station at the Scillies appeared each morning to work with us during daylight, enabling us to cover a more effective scouting area.

The next hunt offered more diversion but left me in greater perplexity as to the performance of listening devices and identifying sounds. Forces consisted of Units 3 and 4. I was hunt commander—that is, after arriving on the scene twenty-four hours late because the whole unit had been in drydock for a routine overhaul. Thus Unit 4 was on station a day ahead of us, during which the chief machinist's mate of SC-36 sighted a periscope only a few yards off but was so "surprised" that he did not notify the captain until after it had disappeared. They picked it up on the tubes, however, chased, and had a light bombing party on a very uncertain fix without apparent results. That night Unit 4 followed some vague

and indefinite sounds clear to the coast of France. When I came out the next day, my first task was to find Unit 4 by inquiring its position, course, and speed by radio and sending it a rendezvous at a certain latitude and longitude, at which we both arrived that afternoon. We then commenced running hunt together in line abreast according to our prearranged listening schedules. The area assigned for the hunt was from twenty to forty miles south of Eddystone and about sixty miles in extension from east to west. At night, therefore, we could get a bearing of start on Lizard Light from either corner of the area or of Eddystone from the center of the northern line; but as a matter of fact we saw no land or lights at all and had to rely for position on sun and star observations.

On the day following our meeting with Unit 4 the fun started. We saw Unit 4 hoist their hearing flags and a few minutes later make a depth charge attack—a pretty spectacle to watch through the glasses as the different columns of water shot into the air just before the shock of the explosions jarred our hull.

The sound detected by Unit 4 and SC-34, but not by the other boats of Unit 3, seems to have been an oscillator which might have been as far as twenty-five or thirty miles distant. During the day humming sounds and hammering were heard by several boats, but fixes could not be obtained and they remained unexplained. The next morning SC-35 and SC-97 heard similar hammering sounds and were able to obtain two good fixes astern at a distance greater than prescribed by the doctrine. Had we been heading in the other direction, I should have signaled an attack immediately, but conditions being what they were, too much time and accuracy would have been lost in making the turn to warrant an attack at that distance. So I thought at the time, but in view of the intermittent nature of the sounds heard and the chance that they would not be heard again, it might have been better judgment to let go a few cans in the vicinity of the fix, because after running down the fix we never heard the sound

again. As a matter of fact, the wing boats were very slow in getting under way, being unable to start their engines after they had been lying cold all night, which would have reduced still further the already small chance of a successful attack. What I might have done was to lay a single-boat barrage with my own vessel. It would at least have given the boys a chance to say they had sunk a submarine (and they would have said so, whatever the official verdict); as a morale effect on the crew, who were getting a bit "fed up" with the monotony, it would have been good policy and worth the price.

Visibility was good at the time, and it is significant that two good fixes were obtained at about the same distance. The listeners on SC-97 claimed they distinctly heard the propeller noises of a submarine, but their commanding officer neglected to inform me of this, reporting it only as a "suspicious sound." As my listeners heard only the knocking or hammering, I concluded that those were the only sounds there were. The same kind of sound was heard the next night in approximately the same position. With the exception of what was heard by the listeners on SC-97 in the morning, none of the sounds were like those ordinarily made by a submarine. But if not a submarine, what was it? Other units had similar experiences in the same locality. It was suggested that it might have been made by the tide going through a wreck, or be some sort of submarine signaling, the presence of the oscillator lending color to the latter theory. I never knew and now no longer care, but at the time it caused me no end of speculation and worry.



Although interesting, the trip was quite a strain, as both the executive officer and I had the flu during the entire four days—light cases, but sufficiently uncomfortable to detract considerably from the pleasure of chasing suspicious sounds. The weather was good until the last night, when



SC-35 running at high speed during World War I. Courtesy of the United States Navy Department.

it breezed up from the usual quarter of southwest. We wallowed all morning in the quickly rising Channel chop and a gray, driving, misty Channel fog, waiting for permission to return to base. We got it at 11 o'clock and let her go for Plymouth with the quartering seas caressing the depth bombs on the fantail, on a course laid from dead reckoning position picked out on the chart after forty-eight hours without a sight. Three hours later we made out the familiar outlines of Rame Head through the drizzle and without changing course made the breakwater in exactly the time calculated from our starting point. Luck, pure bull luck, but a nice feeling just the same.

On the morning of August 30, while holding target practice off Eddystone, we received a radio signal to return to base immediately. An officer was waiting for us at the pier with orders to fuel, take provisions, and be ready for sea as soon as possible. We left at 3 o'clock that afternoon in company with the destroyer *Wilkes* for an area limited in the west by 11° West longitude, about

two hundred miles west of the Scillies and Ushant, in the track of our troop convoys for Brest, where four large German U-boats were known to be operating. We were to stay out as long as our fuel lasted, then to be relieved by another unit which was to come out from Brest. Unit 4 left for the same area with the destroyer *Parker* the next morning.

We did not see much of the *Wilkes*. She would signal our courses by radio, and we would signal her our 8 P.M. position every night. Sometime during the morning she would usually come up for a megaphone conversation. Most of the time, however, she was some twenty-five to one hundred miles away, at times out of range of our radio.

It was a great chance for a surface action. If the Hun found himself followed by hydrophone vessels greatly inferior to himself in armament, he might well consider it to be the safest course to come to the surface and engage the enemy with his greatly superior 4.7-inch gun, one shell from

which would completely demolish a chaser, and trust to his slightly superior surface speed to keep just out of range of his pursuers. He would doubtless have found a zigzagging chaser a hard mark to hit, however. There were three of us, also, and one of us might have got in a lucky hit on him, which would have been distinctly embarrassing had it prevented his submerging during the remainder of his cruise. It would have been an interesting battle, and I have fought and re-fought it many times—always with a happy ending, of course—while lying in my bunk with one hand firmly locked around a stanchion to keep me in, waiting for sleep to come.

There was no battle, however, and no other excitement either. The only variation from routine was when we heard an explosion on the tubes, saw smoke, and heard a faint sound from the same direction. We ran several miles toward it at full speed and finally sighted the *Wilkes*, which had dropped a depth charge on a sound which was probably us chasers. It was the best of all the trips I had; why, I do not know, except that we were so far off shore, knew the enemy was in the vicinity, and seemed to be doing something really worth while.

Just before we got in we intercepted a radio report saying that a steamer had been torpedoed off the Lizard, which spoiled the chances for a night's sleep at anchor. I landed at St. Mary's, a charming little Old World fishing village, and reported to the senior naval officer (SNO), placing my boats at his disposal for the night, a courtesy which pleased him quite a little, I think. With true British instinct for bodily comfort, however, he said he thought we might as well spend the night in harbor, but I was not going to do that when I knew there was a sub about. I showed him on the chart a point about twelve miles southwest of Wolf Rock which I thought would be a much better place to spend the night, to which he agreed, probably with much secret astonishment. He then poured me out a glass of port, which I drank—foolishly, for never have I

felt such a delicious feeling of relaxation, drowsiness, and physical exhaustion as I did after that drink. I cursed that sub but got aboard with eyes almost closed and, to the intense disgust of all hands, gave the signal to get under way. A little after 9 o'clock three dark shapes slunk out of the harbor in the last gray moments of dusk while I on the forecastle of the leading ship, now wide awake again, was shouting back orders to the pilot house as I picked up the just discernible buoys, the old SC-35 lifting her bows easily on the ground swell that rolled into the entrance and roared on the ledges all around us. It was an inky black night, and we saw and heard nothing, but the sub was not many miles away. The USS *Chester*, scout cruiser, tearing up the Channel in the small hours of the morning nearly ran him down as he was lying on the surface only a few miles from our position, charging batteries and listening to the wireless news from Berlin.



Unit 4—the “Fighting Fourth” as they called themselves—got in a day ahead of us with a real story to tell: an enemy submarine sighted on the surface in broad daylight. The *Parker* was with them and saw it the same time the chasers did, about three miles distant. When the destroyer began to belch smoke at full speed ahead, the sub immediately submerged, but not without leaving a telltale oil slick where she had evidently been pumping bilges; on this the *Parker* dropped a few tons of TNT. The chasers stopped as soon as the *Parker* finished her barrage and immediately picked up the sub on the tubes. They followed her for two and a half hours, the Hun changing course and doubling back many times, and finally bombed her on a fix 125 yards distant from the flagship. They never heard her again after the attack, but no oil or debris appeared on the surface, so there was no evidence of destruction or even damage. Then the British secret service came into play, receiving information that one of the

submarines operating in that area—thought to be the U-53, famous for her work off Nantucket Shoals Lightship in October 1916, commanded by one of the most experienced and capable submarine commanders in the German navy—had returned to Kiel after having expended only a few of her torpedoes. After the Armistice, when the U-53 was delivered in Harwich with the other surrendered German submarines, she was leaking badly. That was no evidence, but few cases presented better. The "Fighting Fourth" felt some pride in it, and I for one envied them their good fortune to have really seen the enemy.

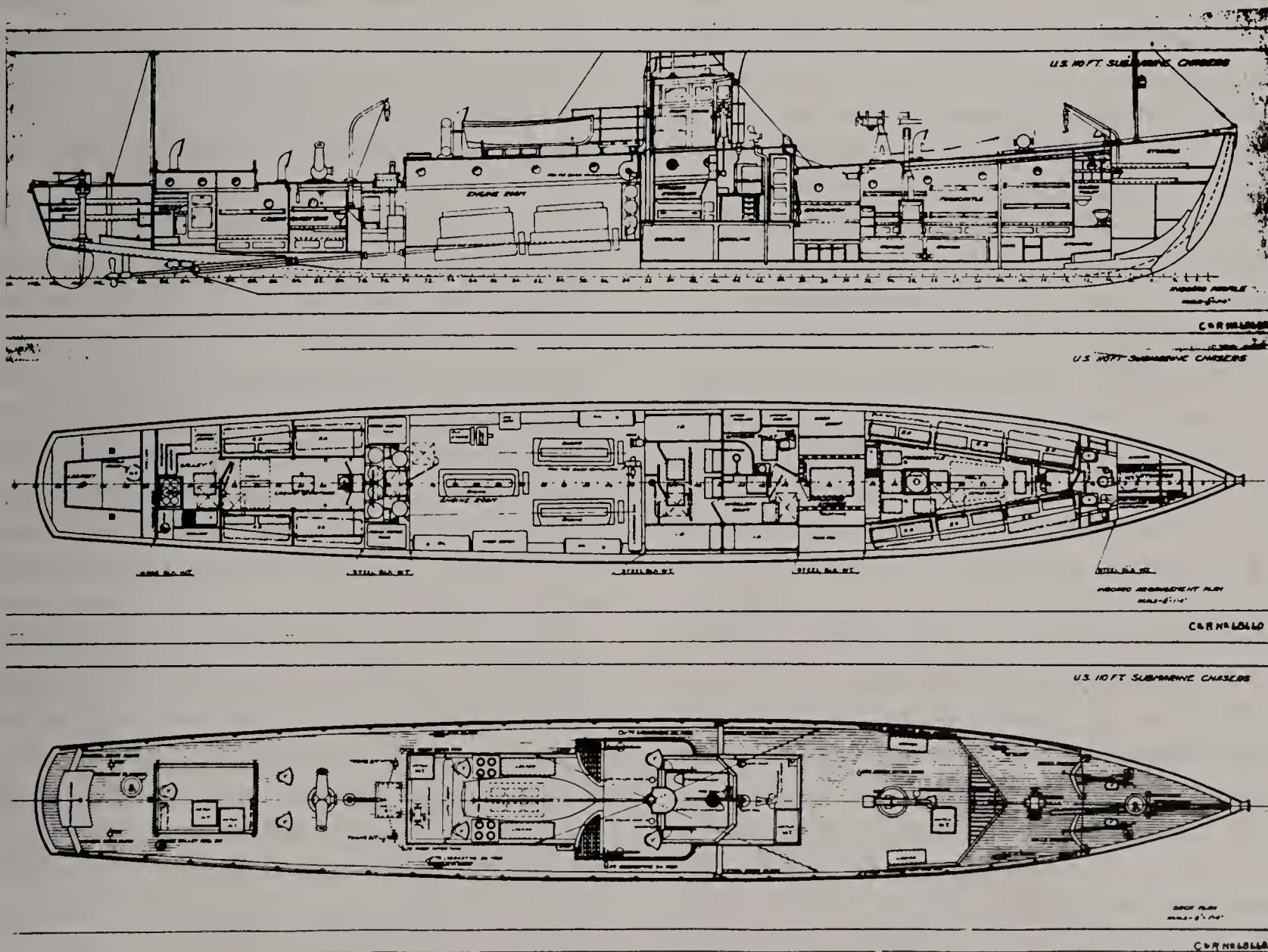
At 8 A.M. on September 11 the USS *Wilkes* and Units 3 and 4 left Plymouth, bucked all day into a southwest chop, and at 9 P.M. commenced drifting hunt twenty miles north of Land's End. On the way out the SC-35 ran into a little nest of three British mines, two of which we just missed by a few feet with engines going full speed astern, but by this time we were pretty expert at picking them off with rifles, even in a rough sea, and were soon on our way again with strict injunctions to the lookout to give longer notice the next time. The hunt area extended from 50° to 51° North and indefinitely to the westward, depending on submarine reports. It was a relief to lie to after jumping all day into a head sea, with the cabin blue with gas fumes, and nice to turn in for the 8 to 12 watch below after standing, bracing against the roll and hanging on all day—although on the first day out the incessant rolling and banging kept me awake. Half an hour later I was slipping into my sea boots and life jacket and cursing at a radio message just received from the *Wilkes* ordering us to proceed at nine knots on a WSW course to a point out in about 10° West where the *Galway Castle*, a British hospital ship bound for Canada, had just been torpedoed. That nine knots was a joke. We tried it for a time until we nearly drowned the vessel. I then signaled six knots, then four, which was all the boats would stand jump-

ing into the sea kicked up by a breeze which reached gale force in the puffs with nothing but the coast of America as a lee. Up we would go on the crests, and down we would fall into the troughs, sending a shudder through every timber and good green water swishing aft, breaking into spray on the coamings and driving against the pilot house in sheets, mingled with a pelting rain, occasional flashes of lightning, and the rumble of thunder. Almost all hands except the skipper were very seasick. The radio set was completely out of commission and all wiring short-circuited (not the only time by any means), occasionally causing our masthead blinker light to burn and flicker in brazen defiance of zone regulations. It was magnificent sailing, though, and I really enjoyed it, but when day broke, my 24-hour watch began to tell, and I kept seeing things ahead that were not there. A schooner would loom up dead ahead, then vanish, and what had been the smother under her bows would be only the breaking crest of the next sea, then a ledge breaking, then another vessel—by that time I decided it was time to turn in. It is remarkable what a single hour of sleep will do. After turning out to find the weather clearing and moderating, with one of the bleak islands of the Scillies visible to the southward from the top of a sea, I was as fresh as ever. We had lost SC-97, and Unit 4 had lost SC-98. We were in touch with Unit 4 and the *Wilkes* by radio only. We finally picked up the lost sheep by radio, and much to the relief of all got orders to rendezvous at Penzance. We straggled in between five and six that afternoon, snuggled up to the quay all together, and started to repair engines and other minor casualties.

The *Wilkes* sailed that night for Queenstown, and after refueling the chasers left for the hunt area north of the Scilly Isles. That night we again got orders, this time from the *Parker*, to proceed to 10° West, and again plowed into a stiff sou'wester, not blowing as hard but raining and misting, with everything getting wet below and the vessel full of gas fumes. At midnight a mes-

sage came through canceling that order and directing us to "remain within easy striking of Scilly Isles," which we gladly did. In the morning it was thick and still rough, but I managed to find Unit 4. I ran up within hail of SC-36, holding a long megaphone conversation with Captain Dick, expatiating on the undesirability of our present position in the Western Ocean and arguing the advisability of "investigating" Crow Sound in the Scillies, thereby remaining within the easiest possible "striking distance" of those islands. This was followed by a less amicable argument as to our position at the time, our reckonings differing by as much as fifteen miles, when

the fog let up a little and disclosed to our astonished sight the surf-fringed tower of Bishop's Light, at the western extremity of the Scillies, just three miles to leeward and several miles from where it should have been, thus settling the argument in nobody's favor. It was so good a landmark that we could not resist the temptation. About 2 P.M. six chasers dropped their hooks in the sheltered anchorage of Crow Sound, officially "to relieve the strain on personnel and effect minor repairs." [They were required by the Navy to have a justification for such a decision.] It was very snug lying in there, surrounded by little bare, bleak islands in a misty, drizzling fog driven



One side and two deck plans of a sub chaser. Courtesy of the United States Navy Department.

before a stiff sou'wester coming in puffs off the beach to windward.

That afternoon I was too tired to do anything but sleep, but after supper Dick and I pulled ashore with his cook and a milk can. Leaving the wherry nestling in the seaweed, we turned our backs on the harbor, the gray shapes of the chasers, and the dim forms of the island just discernible through the fog and made our way up to a small, low, stone farmhouse, more attractive even than our own little white ones, kept by cousins of the people who keep them Down East, just as nice and hospitable but without the Yankee twang, an old man of eighty-six, two women, a baby, and a dog. We were after milk and got it, fresh from the cow, and it did taste good after eight months of the canned variety. We drank it in the most attractive stone out-buildings with rough wooden rafters and a heavy wood table. On the walls hung blocks and tackles that Drake might have used, a spy glass from a wreck, wonderful old lanterns, in fact all the things that a 200-year-old farmhouse on one of the wind-swept and spray-soaked outposts of Old England might be expected to have. Then back to the beach in the dusk and an easy pull before the wind out to the ship.

The next morning I was called before daylight and immediately sent a blinker signal to "heave short." We were all under way and standing out just as the buoy at the entrance became visible in the growing light of a gray, cheerless, misty dawn, with the moisture-laden southwest wind sending a damp chill through oilskins and many layers of heavy clothing. In answer to a radio request from the *Parker*, who had been escorting the *Galway Castle* until the latter finally sank, we sent them our 8 A.M. position, course, and speed, with the information that we had enough fuel for three more days at sea. The *Parker* picked us up shortly before noon and signaled that she had to return to Plymouth for fuel and that we were to return with her. On the way home at about 4 P.M. off Longship's (Land's End)

we intercepted a message from SNO *Penzance* to "All Allied patrol vessels" that a submarine had been reported off Trevose Head on the North Cornish coast. I requested permission to proceed to Trevose Head instead of returning to base, half hoping that it would be refused, but the *Parker* came back with "request approved providing you have sufficient fuel," and we did have enough for two days. With a semaphored "Good bye and good luck; wish we were going with you," the good old *Parker* disappeared into the haze. Unit 3 rolled off down the wind to the northeast, bound for a new coast with the ever present hope of a contact with the elusive Fritz. I knew that Dick [Unit 4] would be along when he heard where we were going. In a few minutes "Sparks" reported, "The 36 is calling us." "We are following; request permission to operate under your orders," was his message. We answered with our course and speed and arranged a rendezvous for the morning.

As the day was fading into a gray and murky dusk, three trawlers suddenly appeared out of the mist with foam at their bows, smoke belching from their funnels, and their crews at General Quarters, all looking really quite ferocious. By this time well equipped for such emergencies with "Aldis" flashing lights for long distance signaling, we snapped out the recognition signal before they had a chance to fire. The middle of the three hydrophone trawlers, for such they proved to be, came back with the peremptory signal "Stop." We lay around while the lieutenant, RNR, senior officer of the trawlers, astonished by the sight of first one submarine, then another, and then a third, had his first look at a U.S. sub-chaser. We had quite a conversation, each hanging onto the rail of the bridge with one hand and holding a megaphone in the other. He informed me that a submarine had been sighted off Godrevy that afternoon. We exchanged radio call signs, told each other where we were to operate during the night, and made arrangements for a

rendezvous in the morning. After a few disparaging observations on the weather and some more favorable comments on the attractions of the city of Plymouth we parted the best of friends, chasers and trawlers rolling off in opposite directions into the gloom.

In the middle of the night, it being pretty clear, I sighted a dark object suspiciously like a submarine on the surface. Since I did not trust the listener's opinion that it was a steamer, we "investigated" at full speed with all hands at action stations. It was indeed a steamer, with a superstructure amidships which I had taken for a conning tower, showing how out of proportion objects may appear at night.

In the morning we all rendezvoused off Trevose Head with "nothing to report," meeting also by chance three other units of chasers, bound, they said, for Square 81, off Land's End and the Scillies. I therefore directed Unit 4 to hunt to the westward, between Trevose Head and St. Ives, while Unit 3 took from Trevose Head northeastward as far as Hartland Point. It was a good day for hunting, not much wind and low visibility. We were pretty keen but got no contact of any kind. Late in the afternoon, however, about twenty miles off shore, we made a rescue when SC-34 picked up a life raft made of kegs lashed together, on which the sole survivor was an emaciated but very much alive black cat. How long he had been there the Lord only knows; we thought a vessel must have been torpedoed near there very recently but could find no record of it. The cat stayed aboard SC-34 as mascot but could never be induced to come on deck and grew very frightened when put there. He must have had a rather trying experience for a black cat.

Just before nightfall came a radio from shore that an explosion had been heard in a northwest-erly direction by the shore hydrophone station at Trevose Head. Having started on a running hunt to the southwestward in the general direction of

the explosion, an hour later we picked up another message that a ship had been torpedoed and sunk six miles northwest of Trevose Head and a message to a trawler ordering her to search for a boat reported missing with survivors. That seemed like real business at last, and after the signal for full speed had gone out over the radio phone, we were hammering through a rising southwest chop that sent the spray all over her. My idea was to make for a point about fifteen miles off Trevose Head and carry on a listening patrol, hoping thus to intercept the sub as he went off shore. It was their custom on this particular stretch of coast to come in, sink a ship, go out to sea, and then strike in shore at another point the next night. The night was cloudy, visibility was fair with a moon. It was breezing up from the southwest, however, and getting choppier every minute, so that by the time we arrived at our position, listening conditions were poor. When they got worse, and after the trawler which had been sent to search for survivors reported that he had not found any, we investigated in shore near Trevose Head and searched until the moon set at 3 A.M., when it got too black to see anything at all, then went off shore again. We never heard whether any more survivors were picked up.

As all boats were getting low on fuel and supplies and the crews were pretty well fagged out, we got under way at daylight on our one hundred-mile run home. We bucked a head sea around the end of England, past Pendine and Longship's, with a ring of surf along the bleak, grand Cornish coast, the lonely lighthouse on the Wolf standing out clear above the horizon to the southwest, then bore away for the Lizard, putting the lee deck under at every roll, then a straight course—seventy-four magnetic, forty-five miles to Rame Head and home.

After we got in we learned that two other vessels had been torpedoed and sunk that night, one at midnight, the other at 3 A.M., both near the same spot a few miles northwest of Trevose Head. As we had been close by it made me pretty sick,

but we could not have kept a better lookout or been more alert than we were. It was the same old story of the unescorted small merchant ship. The torpedo hits amidships, killing everyone in the engine room and putting the wireless out of commission. The boats on the side on which it hits are stove by the explosion, those on the other side cannot be lowered. A few men cling to a life raft or bits of wreckage and may or may not be saved. The rest go to swell the number of the forgotten dead of Britain's great mercantile marine. Those fellows were not to be blamed for being a bit "jumpy" and firing at a chaser, as they occasionally did, in the half light of dawn.

The shipping that passed along this north coast of Cornwall and Devon was made up in the main of colliers. All the coal from the great Welsh mines for France was shipped in these vessels, which steamed singly along the coast to Penzance, where they were formed into convoys and sent across the Channel to French ports. It was therefore an extremely important artery and absolutely essential to the prosecution of the war that it should be kept open. It was a bad stretch of coast because there were no harbors and no shelter at all from the northward and westward in its entire length. There was no method of holding up traffic during the night as was done on the Channel coast. Since there was no shelter for small patrol vessels, it was likewise a difficult coast to patrol effectively. It was a hard problem. By the first of October, as the subs began to work further in shore, things got so bad that the convoy system had to be adopted, although reluctantly because it meant a great waste of tonnage on so short a run. Throughout it all the little, dirty black colliers, manned by the scum and dregs of the British Merchant Service, kept going, while the workers in the mines struck for higher wages.

The next hunt, September 22–26, was an easy one, mainly because the weather was so bad that we were tied up to a wharf for a day and two nights. It was the old happy combination of Units 3 and 4 and the *Parker*, the last time we were all

together. We started bucking a bad chop, then a nasty chop, and off the Lizard found ourselves plunging into the worst short sea I have ever encountered. About then SC-34 sprung a leak in her gas line, and we had to escort her into Newlyn, a little artificial harbor in Mounts Bay near Penzance. The next day it blew a gale from the northwest, and the *Parker* very kindly kept us in the lee while she was tossing around outside. The following morning we got out by moonlight and witnessed a beautiful sunrise, clear, crisp, and northwest. At 10 A.M. the wind shifted to southwest, and by noon it was shut in with thick fog—Channel weather.



I have written a good deal about our life and work at sea but have not touched on our work—and play—in port, where, after all, we spent more than half our time. In an article on the Plymouth chasers, a writer in *The Saturday Evening Post* very aptly describes their appearance after coming into port as "floating back yards." It was sad but true that all our decks leaked, and it was only in very remarkable summer weather that bunks and clothing did not get wet or decidedly damp. The first thing that was done—after a large bag of mail from the States had been distributed into eager hands—was to air bedding and clothing if weather permitted. In July and August, although rain and showers were frequent, there was plenty of sunshine in between, but after September 1 rain and dampness were the rule, and getting things dry was difficult. Much of a commanding officer's happiness depends on the appearance of his ship, and a ship that needed paint, coupled with a bad spell of weather in port, was a bad combination for both skipper and crew.

On October 4 four units left with the *Aylwin* ran twenty miles south of Eddystone, then assumed hunt formation and took up running hunt to the westward. It was the regular cloudy southwest weather, with the spray seeping

through the pilot house and leaking into the bunks below. We welcomed drifting hunt when darkness fell at 6 o'clock about fifteen miles off the Lizard. The *Parker* and three other units came through our formation after dark to take up drifting hunt in shore. The *Aylwin* then got orders to return, and the *Parker* sent a message directing the senior officer of the chasers to take charge and carry on running hunt to the westward during the night. As I was not senior officer, I awaited orders, but none came. Finally the *Parker* called us and, evidently thinking I was the senior, told me to take charge. Accordingly, I set a course to the other units, and we pounded into a rough sea in a black, rainy night which cleared about 1 A.M., growing very cold with the wind shifting to the northwest. About then I signaled a change of course to the eastward, but when day broke, none of the other units were to be seen. By this time waves from the senior officer's radio appeared on the air, arranging a rendezvous off Wolf Rock at 10 A.M. He had been disabled during the day and had not been with the formation during the night. We were then about twenty-five miles south of the Lizard and soon picked up the land through the clear atmosphere of a bright, crisp October morning, joining the formation at the appointed hour. That afternoon, for some reason best known to himself, the hunt commander took us all into Newlyn with the apparent intention of tying up for the night. As a matter of fact one or two of the boats, including SC-97, had to put in for engine repairs, but that did not justify all boats going in. On arrival we got news that a submarine had been sighted off shore that afternoon and was expected to come in shore that night. . . . Units 3 and 4 requested permission to go out and left shortly after dark, leaving the other two units tied up to the quay at Newlyn.

I was struggling through the first hour after coming on watch: those awful fifteen minutes when it seems almost impossible to get really awake, the unutterable boredom. There were no stars to study and nothing but the moaning of the

wind, the swish of the water, and the rattle of the gear as the ship rolled. I had just sent a man to the galley to make me some toast and coffee when the radioman called up through the voice tube that there as an "SOS" coming in very loud. In an instant I was awake and in another was down in the radio room watching "Sparks" take down the message beginning with the fateful letters SOS SOS SOS SSSS SSSS SSSS, then the ship's position, then the name, a Frenchman. It was the position that gave trouble: "2 milles S Runny," which I took to mean two miles south of Runnelstone, a dangerous reef off the southern point of Land's End. The captain was evidently rather excited, for the longitude given was that of the Lizard. As we were just between Runnelstone and the Lizard, I could not do anything until I found out what his position really was. We waited there while Land's End shore station tried to call the ship, and the ship again sent its call for help into the night. The minutes dragged by as we waited, and I thought of the sinking tramp steamer, the crew trying to lower the boats, and icy water, and the Hun. "Sparks" may have been thinking the same, but all he said was, "His sending is punk." Finally it came in correctly: longitude $5^{\circ} 40'$ West—Runnelstone. But the message stopped suddenly in the middle of a word, and that ship was not heard again.

After telling SC-34 to follow us and search (SC-97 was still in port repairing her engines) I rang up reserve speed on all three engines, and the old SC-35 shot ahead into the blackness with the spray flying in sheets over the pilot house and clear aft to the galley hatch. There were only eight miles to go, but it was a wild ride; I never drove so hard before or since. Those in the forecastle got pretty well shaken up. It was ticklish business, too, knowing that several trawlers and Unit 4 were doubtless all converging at full speed toward the same spot, and I was glad enough to slow her down after reaching the posi-

tion. We then began a systematic search, which was also ticklish because we were dangerously close to the land and the reef with nothing but the red sector of Longship's as a guide. Except for escaping collision with a trawler by a few feet we saw nothing, either then or after daylight, nor did anyone else so far as I know. Another "*Spurlos Versenkt* (sunk without a trace)."

Just before dawn I picked up a convoy all for myself, a tramp steamer that was rounding Runnelstone, probably in blissful ignorance that Fritz was near. On this night I thought she needed an escort and approached her cautiously, flashing the recognition signal, then zigzagged along a few hundred yards on her port beam, keeping her always between me and Longship's, against whose powerful light she was clearly silhouetted, a beautiful target for a torpedo. I kept with her around Land's End, leaving her when it began to get light. I wondered whether he knew that we were escorting him, and if he did, whether he was thankful for it or amused by it—perhaps both.

One morning shortly after dawn Unit 4 sighted an object looking like a sail, which disappeared. Visibility was rather poor, and they did not think there was sufficient evidence to call it a submarine. Since no sinkings or enemy submarines were reported in the area, there was nothing to explain. With that possible exception no enemy contacts were made. I remember the weather as being distinctly better than the average of the few preceding hunts. In my official report of the hunt, however, I find this paragraph:

Total of 24 hours listening conditions were excellent, 12 hours good, the remainder of the time unfavorable.

In other words, favorable conditions for listening prevailed during thirty-six hours out of one hundred, in a period of above average weather for that time of year. This example well illustrates what the chasers were up against in these

waters. Their principal function was the sound detection of submarines by devices which were rendered inoperative or at least ineffective for perhaps seventy-five percent of their time at sea.

During that trip I realized for the first and only time the interesting spectacle of a convoy made up entirely of sailing ships. The convoy, sailing out of Falmouth for the French coast, consisted of thirty-two vessels of various sizes and rigs ranging from an American five-masted schooner to a small English ketch. There was one bark, one barkentine, a hermaphrodite brig, and several schooners, topsail schooners, and ketches. The larger vessels were under short canvas in order to adjust their speed to that of the smaller ones. A solitary trawler, steaming proudly at the head of the formation, comprised the escort. When the wind came out ahead later that night, I could not help wondering what happened to the formation.

On October 14 I had to send the SC-35 back to Plymouth with a leak in her gasoline tank which took three weeks to find and repair. During this time her commanding officer was down with influenza; both ship and captain were on the hospital list together. The German army was in full retreat. Slowly and with difficulty it began to dawn on the consciousness of a war-dazed world that victory was close at hand. Around the first of November it was reported and pretty well confirmed that all German submarines in the vicinity of the British Isles had returned to their bases. Many submarines still remained in the Mediterranean, left without a base there when Austria surrendered. It was thought that these would attempt to return to Germany. To prevent this several layers of hydrophone barrages were stretched across the Straits of Gibraltar. Should information be received of the escape of any enemy under-sea boats through the Straits, our entire detachment was held in readiness. . . . Only two units were kept out on patrol, and these for only forty-eight hours at a time.



The news came at 9:30 A.M. on November 11. The radio operator read it off to me through the voice tube in the same unemotional tone of voice in which he had read the hundreds of miscellaneous signals received or intercepted during the last six months.

From: C. in C. Davenport.
To: All Allied Men of War

Armistice is signed. Hostilities cease forthwith. Enemy submarines on the surface will not be attacked unless hostile intentions are obvious.

Our justification, like that of most of the "Silent Navy," was in what we prevented the enemy from accomplishing rather than in what we accomplished against him. Just what that amounted to it is impossible even to estimate. That he held us and our hydrophones in considerable respect is undoubted, and the fact that the chasers and other patrol vessels were out on the job must have had a decidedly deterrent effect on his operating efficiency.

An official statement issued by the Navy Department shortly after the end of hostilities credits the chasers with forty percent of all the submarines sunk by American vessels during the war, more than were sunk by any other single type of vessel. This number was four. Among all contacts ranging from "known destroyed" to

"possibly damaged" the chasers shared equally with the destroyers with twenty each. All of these figures have probably been increased since then. Of the four known sinkings by chasers, all occurred in the Adriatic, where the smooth weather and the great depth of water made listening conditions excellent and where a fairly effective hydrophone barrage could be maintained at all times across the Strait of Otranto, through which all submarines had to pass bound to or from their bases. In the English Channel and the Irish Sea the problem was different, not just because of the unfavorable listening conditions but because of the broad area over which the enemy had to be hunted.

As to the practical utility of hydrophones, I gather that opinion is divided but mostly favorable. They were not the answer to the submarine. No one force was by itself the answer, unless it was the barrage laid by the American navy across the North Sea, but they formed a weapon that could not have been dispensed with without great cost to Allied shipping, and the margin was small enough as it was. My own experience does not lead me to think very highly of their value. This story deals only with events as they happened to me. Of the experiences of others I have not enough knowledge to be a competent judge. But knowing all the defects and limitations of our listening devices and all the difficulties under which we operated, I should nevertheless have been decidedly nervous in a German submarine in the presence of American sub chasers in the summer of 1918.

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Attention: Authors and Commentators

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~ MUSEUM FOCUS ~

THE PAPERS OF HENRY A. MORSS JR. (1911–1993)

by Victor A. Lewinson and Kurt Hasselbalch

In 1995 the Hart Nautical Collections (HNC) of the Massachusetts Institute of Technology (MIT) Museum received about four cubic feet of the papers of Henry A. Morss Jr. They form Accession 96.17, and include periodicals and technical papers. The principal subject—sailing, racing, and design of yachts, including theoretical research and manuscripts of publications—is of prime interest to HNC. In addition, Morss, his father, uncle, and a family company (Simplex Wire and Cable Co.) were traditionally strong supporters of MIT.

Walter Giger Jr. (a friend and colleague of Henry A. Morss Jr.) transmitted the collection to HNC after sorting and classifying the papers. We are pleased to express our thanks to him. We have rehoused the papers in archival folders and document boxes, and created finding aids (including this article) to assist access to the collection.

The entire collection is housed in twelve document boxes.

Victor A. Lewinson is a volunteer at the Hart Nautical Collections of the MIT Museum and also at the Peabody Essex Museum. He spent thirty years in maritime freight transportation consulting and research. Kurt Hasselbalch is the curator of the HNC.

- Box HENM.1, Folders 1–12
- Box HENM.2, Folders 13–30
- Box HENM.3, Folders 31–45
- Box HENM.4, Folders 46–50; “Transoceanics,” 1 AYRS (Amateur Yacht Research Society) Newsletter 1976–93; AYRS-AIRS 1–11; AYRS-FCCG 1–2–3; AYRS New England Section; Experimental Yacht Society Journal
- Box HENM.5, AYRS Bulletin 1–70
- Box HENM.6, AYRS Bulletin 71–114
- Box HENM.7, Duplicates (AYRS & AYRS-AIRS)
- Box HENM.8, *Oceanus* 30:3–36:2
- Box HENM.9, *Oceanus* 25:1–30:2
- Box HENM.10, *Oceanus* 19:1–24:4
- Box HENM.11, *Oceanus* 4:3–18:4
- Box HENM.12, *Oceanus* duplicates; 10 audio tapes (HENM.12.1 to .10)

Morss's technical papers are now in about seventy folders and subfolders (Boxes HENM.1 to .4). Most of these papers are from the same years (1955–93) as the periodicals; there are a few pages from perhaps 1946, and some reprints and patents printed as early as 1920. They start about three years before the beginning of his MIT service and extend through his retirement to his death. There are also ten audio tapes of unknown relevance on geophysics, *The Tao of Science* (by R. G. H. Siu), and the Massachusetts Crime Commission Report of 1957.

The papers include pages of analysis of yacht designs and of the interactions of boat, wind, and water. There are data, graphs, memos, manu-

scripts, letters, brochures, and reprints. We find information and experience with yacht equipment as well. Morss's interests in geophysics, conservation, and the environment are also clearly represented in this collection.

A few items are of special interest:

- In folder 1, Henry A. Morss Jr.'s "Research Notebook" covering September 1963–February 1974, plus Giger's three-page description. It contains analysis, some theoretical, some on drag tests on various boat hulls.
- Ten color snapshots of Morss, his wife, friends, and boats (folder 4a).
- Correspondence (folder 12) with Dr. Jerzy Wolf, an aeronautical engineer at Poland's Aviation Institute, on sail skimmers and hydrofoils.
- In folder 36, Morss's notes (1975 and 1978) on disposition of his papers. Also correspondence appointing Morss as the first Honorary Vice President of AYRS.
- Four pages of handwritten notes in folder 48 for a talk on "Religion."
- In Box HENM.4, we have added to the collection a copy of "Transoceanics," an undated company history of Simplex Wire & Cable Co., published about 1956–7.

The collection includes long runs of two periodicals, *Oceanus* (journal of the Woods Hole Oceanographic Institution) and the *Bulletin of AYRS* (the Amateur Yacht Research Society). For *Oceanus*, HNC has volume 43 (1956) to volume 362 (1993), with only a few missing issues. The *AYRS Bulletin* is complete from 1 (ca. 1955) to 114 (1993), including two books, *Design for Fast Sailing* and two editions of *Self Steering*.² There are also fifty-two issues of the *AYRS Newsletter* (1976–93), twenty-two regional AYRS newsletters (1971–94), and 1–6 (1977–8) of the *Experimental Yacht Society Journal*. About sixty duplicate issues of *Oceanus* and *AYRS Bulletin* are included.



Henry A. Morss Jr. Photograph courtesy of the MIT Museum.

Henry A. Morss Jr. was born 1 February 1911 and died 17 November 1993. On 21 January 1950 he married Elisabeth W. Mixter (born 1919) of Brookline, Massachusetts. Like the Morsses, her family was associated with MIT. They had no children. Henry Morss received an A.B. from Harvard in 1932, spent a year in England at Trinity College (Cambridge) as a Travelling Fellow, and earned a Ph.D. in physics from MIT in 1936 (his thesis was entitled, "Structure of Stretched Rubber"). Although his name appears in *MIT Class Twentieth and Twenty-Fifth Anniversary Reports for the Class of 1934*, he seems to have had only the Ph.D. degree from MIT.

Soon after receiving his Ph.D., Morss went to work for the family company, Simplex Wire and Cable in Cambridge, Massachusetts, becoming

factory manager, vice president, and director by 1939. He was close to the technical activities of the company, rather than financial or management. When the family sold a third of Simplex to the public in 1958–59, he left and joined MIT's Department of Geology and Geophysics, first with title Lecturer (1959–64), although his later title (Administrative Assistant, 1964–72) better describes all his MIT service. He administered the development of a program in planetary and space science, which expanded the department's purview and name to "Earth and Planetary Sciences" in 1969. He also assisted in running a large department and in construction of a new Earth Sciences building.³ As the papers show, he had two decades of active retirement after 1972.

From early in his MIT service, he was associated with the Woods Hole Oceanographic Institution, of which he was Trustee (1964–72, 74–82). A joint program in earth and planetary sciences was established in 1967 between MIT and WHOI which continues to the present. Morss belonged to several yacht clubs and the Amateur Yacht Research Society; the latter elected him its first Honorary Vice President in 1991 in recognition of his yachting contributions (Folders 4b & 36).

Morss describes his main interests as "Science, Music, Sailing."⁴ The Collection gives ample evidence of the first and third, but comparatively little about music.

Following are thumbnail sketches of some of Henry A. Morss Jr.'s close relatives, starting with his grandfather, who began the family business.⁵

- Charles Anthony Morss Sr. (15 October 1822–26 July 1903) appeared in the Boston City Directory (BCD) in 1842 and described himself as wire-worker. He played a principal part in the family wire and cable companies, of which Morss & Whyte and Simplex Wire & Cable were most important. He was President of the latter from its start in 1895 to

his death in 1903. He married Mary Elizabeth Wells (11 February 1831–38 December 1909); both were descended from early seventeenth-century arrivals in North America. They had five sons.

- Charles A. Morss Jr. (13 July 1857–5 July 1927) went into the wool business in 1873, and by 1884 was a partner in the firm of Hobbs, Taft and Co. He later joined Simplex, where he was treasurer by December 1917, and then spent 1917–22 as a governor of the Federal Reserve Bank of Boston. He returned to Simplex as Vice President and Director until his death. He married Martha Houghton Reed (October 1862–11 November 1939); they had four children.⁶
- Robert Morss (15 November 1860–15 February 1863) died in early childhood of scarlet fever.
- John Wells Morss (December 1862–4 June 1939), A.B. Harvard 1884, L.L.B. & A.M. 1887, practiced law and was director or trustee of family enterprises. He never married and was troubled by lifelong ill health.
- Everett Morss (6 March 1865–27 December 1933), SB MIT 1885, A.M. (Hon.) Tufts 1923, gave his whole working career to the family companies, as president of Simplex from 1903 to his death. He was very active in community affairs, heading the Boston Chamber of Commerce in 1921–22. Especially, Everett supported MIT (President of the Alumni Association, 1906–07; MIT Treasurer, 1921–33; member of the MIT Corporation, 1908–33 and its Executive Committee most of that time). HNC has plans of his boat *Hyassa* (1913), built by the Herreshoff Manufacturing Co. He and his wife Ethel Reed (December 1865–14 November 1936) had three children.
- Henry Adams Morss Sr. (30 August 1871–6 May 1936), SB MIT 1893, also served the family companies all his working years, finally as president of Simplex (1933–36). Like his brother, he loyally supported MIT as corpo-

ration member (1911–1916, 1919–1936), assistant treasurer (two terms between 1920–34), and president of the Alumni Association in 1918. He was strongly interested in yachting. In 1922 he commissioned an experimental boat *Lasca* from George Owen (MIT professor, 1915–41); HNC has the plans and half-model. On 10 March 1909 he married Edith Sherman (11 December 1881–9 January 1958); they had five children, of whom Henry A. Morss Jr. was the eldest.

When Charles Morss Sr. is first found in BCD in 1842, he was one of very few in Boston that was identified as a wire-worker. Isaac F. Williams had claimed this trade since 1816, and had several company names (I. F. Williams & Son & Co., & Son, & Co.) between 1831 and 1849; the "Son" was probably Daniel. Charles Morss was with I. F. Williams & Co. in 1848, and the company name Williams & Morss appears from 1849 to ca. 1859. We first find Oliver Whyte Jr., another wire-worker, in 1844. The company of Morss & Whyte began about 1859 and was still listed in BCD in 1910, although it had been a part of Simplex Wire & Cable from the founding of the latter in 1895.

"Wire-worker" was a forward-looking choice of trade in the 1840s. At that time, the products were screens, sieves, netting, and even birdcages. By the 1860s telegraph wire was coming in, and the electrical revolution of the last part of the century then turned attention to insulated wire and submarine cable. "Transoceanics" credits Everett Morss, soon after his 1885 MIT degree and arrival at Morss & Whyte, with opening the company's eyes to the spectacular future demand for these products. The development of wire-consuming products was summarized by Thomas Commerford Martin in the 1900 *USA Census of Manufactures* referring to the "sudden expansion" of "the whole range of electrical industries and applications."⁷ He enumerated the telegraph in the 1850s, dynamo construction in the 1860s,

"electrical conveniences" in the 1870s, telephony and electric lighting in the 1880s, electric railways in the 1890s, and electric motors in the 1900s. Generation of electricity in the U.S.A. was below a half billion kilowatt hours in 1892, over two billion in 1902, and beyond eleven billion in 1912.⁸ As for submarine cable, the kilometers laid went from zero in 1850 to almost four thousand in 1865, and to 92,000 in 1875 and 198,000 in 1895.⁹ Simplex's interest in this product rose rapidly in the twentieth century.

Apart from these generalities about markets, we know little about the private Morss family companies until the late 1940s. "Transoceanics" says little about wire and less about the business; it concentrates on design and laying of submarine cables. After Morss & Whyte lost their new plant in Cottage Farm (Brookline, Massachusetts) to fire in 1888, they began to develop their headquarters and principal facility in Cambridge, only a few blocks from MIT. The special quality control requirements of submarine cable finally called for a separate plant, which was built under Henry A. Morss Jr. in Newington, New Hampshire, in 1953.¹⁰

Simplex served as laboratory for many MIT student research projects in the 1920s and 1930s. A particularly interesting one in 1934 investigated Simplex's organization, actual and "optimum."¹¹ It lists some sixty positions and their functions, with the name of the worker. P. R. Morss (son of Charles Jr.), then plant engineer, was the company contact.

Simplex's decline in the third Morss generation is better documented. In 1958–9 the family sold about a third of its Simplex shares to the public. The sale prospectus and some fifteen subsequent annual reports were published and are preserved in the Baker Library of Harvard Business School. During those years, the Morss family gradually left the management and Board of Directors. There were several reorganizations and new investors, and in 1973 the remainder of the company was sold and disappeared. Simplex's

sales and net (respectively) rose from \$10 million and \$100,000 in 1949 to \$47 million and \$2.9 million in 1956, and then fell to \$33 million and \$1 million in 1958. After 1958–9 red ink appears in half the years, with net losses in the millions in four of the last five (1968–72).



MIT founded a Nautical Museum in 1921 as part of the Department of Naval Architecture and

Marine Engineering (now Department of Ocean Engineering). In 1924 Professor J. R. Jack was named director of the museum, with a Visiting (Advisory) Committee of F. R. Hart (MIT 1889; President of United Fruit Co.), H. A. Morss Sr. (MIT 1893) and F. W. Fabyan (MIT 1893). Hart died in 1939, and a year later the Nautical Museum received his name in honor of his support. The Hart Nautical Museum joined with the MIT Museum in 1982 and became the Hart Nautical Collections.

~~ NOTES ~~

1. Simplex Wire and Cable Co., "Transoceanics" (Cambridge, Mass., ca. 1957). Concerns mostly the submarine cable business.
2. Edmond Bruce and Henry A. Morss Jr., "Design for Fast Sailing," edited by John Morwood (AYRS, first edition, 1976); Tom Herbert and others, "Self Steering," edited by John Morwood (AYRS, second edition, 1970; third edition, 1974).
3. R. R. Shrock, *Geology at M.I.T. 1865–1965* (MIT Press, Cambridge, 1977).
4. Henry A. Morss Jr. autobiography, *Twenty-Fifth Anniversary Report, Harvard Class of 1932*, 829–830.
5. Sources for these "thumbnail sketches" included obituaries, records of Mount Auburn Cemetery, Cambridge, Boston City directories, *Boston Blue Book*, the United States Census, MIT and Harvard Anniversary Class Reports, and the MIT Museum biography files.
6. Mostly from obituary, *New York Times*, 6 July 1927, 25.
7. Twelfth Census of the U.S., 1900, Vol. X, *Manufactures, Part IV, Reports on Selected Industries* (1902, Washington DC), 153.
8. *Electrical World* 80, 546, 1922, quoted by Thomas P. Hughes in "Networks of Power," Baltimore, 1983, Figure 1.2.
9. Maxime de Margerie, *Le Reseau anglais de cables sous-marins* (Paris, 1909), 21, quoted by Daniel R. Headrick in *The Invisible Weapon: Telecommunications and International Politics, 1851–1945* (New York, 1991), table 3.1, 29.
10. Obituary in the *Boston Globe* (19 November 1993).
11. John Edward Strong (SB MIT 1931; MS 1934) "The Organization for Manufacture of a Wire and Cable Company," a master's thesis in the MIT Library.

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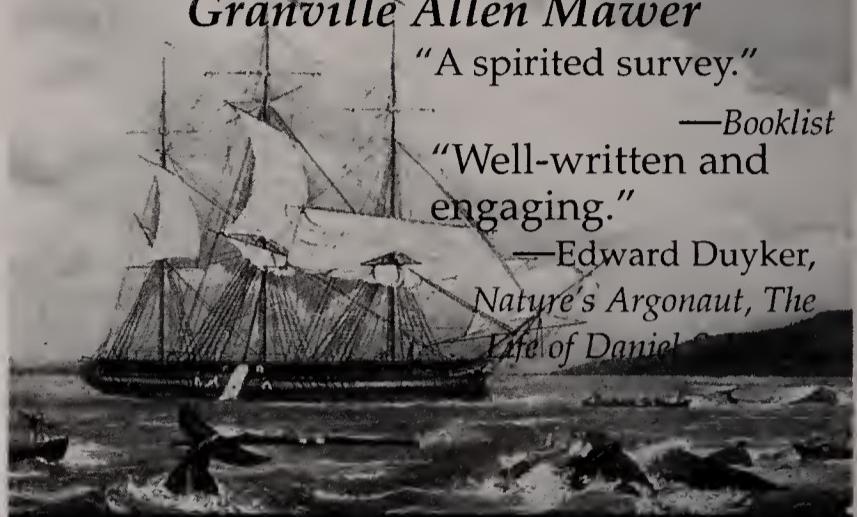
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~ COMMENTARY ~

INTERNATIONAL RESCUE NEEDED FOR "MISERY SHIPS"

by Bill Tieleman

They are the merchant ships of misery. Across the world's seven seas, more than sixteen thousand ships sail under "flags of convenience," an ironic term describing the convenient way greedy owners abdicate their responsibility to the crews operating their vessels.

These ships usually feature crews from developing nations who are underpaid—and frequently not paid at all—living in hellish, unsanitary conditions and often dying due to flagrant violations of safety codes.

Why? Flags-of-convenience nations such as Panama allow ship owners to increase their profits by avoiding the taxes, health and safety regulations, and the decent wages they would be forced to pay their crews under the rules of their own home countries.

The Organization for Economic Development and Co-operation estimated in a 1996 report that owners of these flags-of-convenience ships save about \$700,000 per year per vessel by

Bill Tieleman is president of West Star Communications, a Vancouver communications and strategy consulting firm. This article is reprinted by permission of the author. It was originally printed in the *Financial Post*, Toronto, Ontario, Canada, May 5, 2000.

deliberately not adhering to basic standards of safety and upkeep.

And flag-of-convenience owners are not hard to find. Among the most prominent is Canada Steamships Lines, owned by none other than Paul Martin, the federal Finance Minister, whose ships are flying the flags not of Canada but the Bahamas and Liberia.

Mr. Martin's company is not alone in avoiding registering ships at home. There are an estimated 1,600 flag-of-convenience ships registered in Liberia, while the Bahamas has 1,100, but both are dwarfed by Panama's 4,500. Great seafaring nations such as England have seen thousands of registrations go to FOC countries.

That's why the International Transport Workers' Federation (ITF), a global affiliation of transport unions representing five million workers, took the unusual step of commissioning its own freighter to tour eighty of the world's ports and draw attention to seafarers' plight.

The *Global Mariner* has visited three Canadian ports—Halifax last October, and Vancouver and Prince Rupert in April—on its way to Russia, Japan and Southeast Asia before returning to London. (The ITF maintains a comprehensive website at www.itfship.org on the *Global Mariner* tour.)

Dave Enever, the *Global Mariner*'s captain, says he and his union crew regard the world tour not as a job but as a crusade:

We carry a message of hope for those seafarers who are inhumanely treated. They have

no dignity, nor rights, and the only international organization they can turn to is the ITF.

More people visited the ship in Vancouver than at any other port in North America; 11,000 residents, including Premier Glen Clark and his family, toured the *Global Mariner's* displays, which depict the terrible living conditions and safety hazards of FOC ships.

Peter Lahay, British Columbia's ITF representative, wasn't surprised at the huge Vancouver turnout. The International Longshoremen's and Warehouseman's Union and other waterfront unions have a strong tradition of helping the crews of FOC ships win unpaid wages and better conditions by refusing to service the vessels until the owners pay up.

Since the 1970s dozens of ships have been held in Vancouver harbor without getting fuel, supplies or needed repairs until absentee owners sent their crews cheques for significant amounts. Most recently, the crew of the *Atlantis Two*, a Greek-owned ship, was abandoned in the port of Vancouver after a safety inspection found massive corrosion and other dangerous conditions. Lahay and the ITF then succeeded in obtaining a federal court order that allowed the ship to be auctioned off to pay the crew's wages and other financial obligations. Although the crew members were trapped in Vancouver from November

of 1997 until July of 1998, completely dependent on donations from sympathetic residents to survive, they ultimately were granted more than \$450,000 for back wages.

Unfortunately, the *Atlantis Two* situation is hardly unique. The ITF has documented 199 abandoned ships around the world in just the past three and a half years. And seventy of those vessels came from Panama alone.

Even worse than abandonment is the appalling safety record of the shipping industry. The ITF estimates that more than two thousand seafarers die each year in accidents and sinkings, making it indisputably one of the world's most dangerous occupations.

And sailors who raise concerns about safety, or demand fair pay and treatment, face potential blacklisting by ships's owners around the world. The ITF says some have even been jailed when they returned home for protesting conditions; others are unable to ever find another job at sea.

The ITF campaign aims to force irresponsible flag-of-convenience states to take responsibility for their ships; to give world bodies such as the International Labor Organization the power to intervene; and to establish funds to assist seafarers in emergency situations. But will Canada support the campaign at the United Nations, or will it allow companies like Mr. Martin's to continue to profit at seafarers' expense?

AWARDS

PROFESSOR JOHN HATTENDORF AWARDED CAIRD MEDAL BY THE NATIONAL MARITIME MUSEUM

Professor John Hattendorf of the United States Naval War College has been awarded the National Maritime Museum's Caird Medal for 2000. The Caird Medal was presented by the Chairman of Trustees of the Museum, Sir David Hardy, in the presence of the Duke of York and the other Trustees on 7 December 2000. Professor Hattendorf is a maritime historian with an international reputation, who has published over thirty books and innumerable articles and reviews. He is editor in chief of the *Oxford Encyclopedia of Maritime History*, an important multi-volume work, which is likely to take five years to complete.

Following the presentation of the medal Professor Hattendorf gave the Caird Lecture for 2000, entitled "The Anglo-French Naval Wars (1689–1815) in Twentieth Century Naval Thought," to an invited audience. In thanking Professor Hattendorf, Roy Clare, director of the museum, pointed out the lecture's relevance to the approaching bicentenary of the Battle of Trafalgar in 2005, an anniversary at the heart of the museum's future plans.

The Caird Medal consists of both the award and a check for 750 pounds. It is named after Sir James Caird, the first benefactor of the museum, and is made annually by the trustees to an individual who has made conspicuous accomplishments in a field within the museum's interests.

THE JULIAN CORBETT PRIZE IN MODERN NAVAL HISTORY

The Julian Corbett Prize for Research in Modern Naval History, with an award of £1,000, is available annually for award by the Academic Trust Funds Committee. This prize is granted on the recommendation of the Institute of Historical Research for work not previously published and based on original materials, manuscripts or printed, for modern naval history

The work shall be written in English and may take the form of either (1) a dissertation, (2) an edition of an original document or series of documents, or (3) a critical report on material at home or abroad. It is recommended that the length should not exceed fifteen thousand words.

The prize will be open to competition to any researcher who satisfies the Committee of the Institute of Historical Research that he or she is a student of naval history qualified to undertake research. A one-page curriculum vitae should be submitted with each entry.

No prize will be awarded for work which has already received a Julian Corbett Prize or any other prize.

The work submitted for an award shall be sent in at latest by 1 October to the Director of the Institute of Historical Research, Senate House, Malet Street, London WC1E 7HC.

If the successful work is published, it shall bear on the title page the words, "Awarded the Julian Corbett Prize for Research in Modern Naval History, University of London." Whether

or not publication in question is practicable, a precis of the successful thesis shall be published in

the Institute's journal, *Historical Research*.

RESEARCH QUERY

The Portsmouth Athenaeum is conducting a research project on the nineteenth century artist Thomas P. Moses (1808–1881), who will be the subject of an exhibition and catalogue at the athenaeum in spring 2002.

Moses was born in Portsmouth, New Hampshire. The earliest surviving work of this well-known musician and music teacher is an 1853 print of an arch built for the parade of "The Return of the Sons," commemorating those who had left their native Portsmouth. He painted local ships and harbor scenes, as well as a few portraits, before removing in 1856 to Edgefield, South Carolina. There he served as a plantation music teacher, continuing to paint while he was trapped below the Mason-Dixon line during the Civil War. He is known to have exhibited at Edgefield, as well as at fairs in Portland, Maine, and Manchester, New Hampshire.

Returning to his native city in 1866 he composed poetry and sold music and musical instruments while painting extensively. The next decade was his most productive. His "Kearsarge and the Alabama," the view of the Civil War bat-

tle off the French coast between the Portsmouth-built USS *Kearsarge* and the Confederacy's warship *Alabama*, is now at the Mariner's Museum at Newport News, Virginia.

Most of his work is signed on the reverse of the canvas, in a bold hand, "Thomas P. Moses" with the subject or location and date. Many later works are of literary subjects, views of ancient or faraway places, yachts, and other ships. Unlocated is his 1868 life sized oval portrait of General Ulysses S. Grant, as well as many maritime paintings advertised the early 1870s. His 1875 painting of the ship Charles Carroll illustrated the cover of Nina Fletcher Little's *Little by Little: Six Decades of Collecting American Decorative Arts* (1984).

The Athenaeum is requesting that anyone with information about the artist or any of his paintings please contact:

Richard M. Candee
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BOOK REVIEWS

PETER PADFIELD, *Maritime Supremacy and the Opening of the Western Mind: Naval Campaigns that Shaped the Western World*. London: John Murray Publishers, 1999. 340 pages, introduction, illustrations, maps and diagrams, glossary, notes, bibliography, index. ISBN 0-7195-5655-4. £25.

Maritime history has occasionally been stigmatized as sort of the unwelcome stepchild of the historical profession. While the accounts of sea fights, shipwrecks, voyages of exploration, and other staples of the genre make for exciting storytelling, they seem not to be linked to the larger themes that historians revel in: the grand sweep of statecraft, the evolution of human institutions, and the moral development of cultures and societies. In his latest work the seasoned maritime historian Peter Padfield has gone a long way towards rectifying this deficiency. In focusing on ten naval campaigns which took place between 1558 and 1782, he demonstrates that events at sea relating to trade and warfare determined the shape of the Modern World.

This is an ambitious thesis. Nevertheless, Padfield makes a convincing argument with many sidebars leading in directions that maritime historians usually ignore, such as political theory, economic evolution, the nature of monarchial versus republican government, industrial capability, and the contrast between maritime and continental cultures. All of these strands are ultimately woven into a complex whole which concludes that maritime trade results in the rise of liberal mercantile values and rational economic systems

that in turn render maritime nations more powerful and successful than their continental rivals within the European state system.

The key to realizing the power potential that lies within a maritime state is the combining of vigorous oceanic trading activity with a powerful and competent navy able to convoy merchantmen, while at the same time defending its own coast and defeating rival navies in fleet actions. When a nation can do this reliably and effectively, it has achieved what Padfield calls "Maritime Supremacy." It cannot be beaten by any continental enemy, its economy becomes vibrant and innovative, its political institutions liberalize, and its financial arrangements become rational and transparent. All this ultimately translates into national power far beyond what might be expected given territorial size and national populations.

To illustrate his thesis, Padfield describes the rivalry that flared among four Western European states—Spain, France, Britain, and the United Provinces of the Netherlands—over two centuries, beginning with the Spanish Armada and ending with the American Revolution. Britain and the United Provinces represent the maritime states. Each accomplished the goal of gaining maritime supremacy and holding onto it for a considerable period. Spain and France represent the continental powers. They had maritime interests and ambitions, to be sure, but they were distracted from fully committing themselves to their oceanic endeavors by their internal European wars and the archaic values and methods of their respective absolutist monarchies. It was their fate

to always suffer defeat when they challenged the more nimble sea powers.

Between Britain and Holland, competence at sea was about equal rational political and financial institutions similarly well developed, and determination and initiative of a like kind. In this case it was location that ultimately decided the issue. Britain was to windward and Holland was to leeward. Britain's coast was long and her harbors deep. The Dutch coast was shallow and her ports were bar bound. In heavy slugging matches, smaller and lighter Dutch men-of-war eventually had to give way to the superior weight of British metal, British wealth, and British ability to command the narrow seas.

Padfield ends this provocative volume with a discussion of the naval campaigns of the American Revolutionary War. He sees the emergence of the United States as the logical culmination of British institutional evolution coupled with a momentary lapse of British sea supremacy that made it possible for a mercantile child to separate from its equally mercantile mother. Eventually maritime supremacy would pass into the hands of the child but that, as they say, is another story.

JAMES E. VALLE
Delaware State University
Dover, Delaware

FRANK KITSON, *Prince Rupert: Admiral and General-at-Sea*. London: Constable, 1998. 336 pages, illustrations, maps, bibliography, index. Distributed by Trafalgar Square, North Pomfret, Vermont 05053. ISBN 0 9475800-x. \$40.00.

Sir Frank Kitson, a distinguished British army general, presents the second of a two-volume biography of Prince Rupert. The first covered Rupert's career as field commander of the royalist army during England's Civil War from 1642 to 1647. This second volume treats chiefly Rupert's role in the Second and Third Dutch Wars,

1664–73, when he became one of the principal commanders of England's great war fleets, consisting of eighty and more ships, that fought it out with the Dutch in the narrow seas between England and the Continent.

Born a grandson of James I, Rupert's lineage placed him at the pinnacle of the relatively small number of interlocking families that governed Europe as if they owned it. When the Civil War came to a close, Rupert joined Prince Charles in France. There he took charge of the small war fleet left to the royalist party, and thus his career at sea began.

Without the possibility of a home port in England, Rupert took his ships into the Mediterranean, out and down the coast of Africa, back to the Cape Verde Islands, then over to the West Indies before returning once again to France. These were four years filled with narrow escapes and great seamanship. Although a minor aspect of European history, the tale gives Kitson opportunity to identify the leadership qualities he so much admires: courage under fire, concern for his men, boldness, and competence. He believes that the experience of managing even a small fleet over four years without a home port gave Rupert invaluable understanding of the supply and maintenance needs of a navy.

When the monarchy was restored to England in 1660, Rupert returned there with his cousin, King Charles II, and received his first large sea command in the First Dutch War. Kitson describes the details of the battle off Lowestoff in July of 1665:

Stretching ahead of him for as far as he could see was the long line of the English fleet firing with slow deliberation at the enemy: the balance of his own squadron followed behind his flagship. . . . To his left was a vast confusion of enemy hulls and sails and flags of all sorts, again stretching ahead and astern as far as he could see (page 169).

As painstaking as Kitson is unraveling what actually happened in these sea battles, his book is no plain naval history. He is less interested in sailing or ship design than in command—in the qualities of leadership shown by Rupert. Bravery under fire tops the list, a quality Rupert exemplified. (A dreadful number of his companions of the highest rank were killed as they stood on the quarter deck or drowned while trying to make their way from a disabled or sinking ship.) Rupert's style of leadership, the intelligence of his decisions, and the inspiration he gave to all ranks below was what Kitson believes won or lost battles and determined the course of history.

Next to leadership in action Kitson gives importance to the Sailing Instructions. These Instructions were prepared before action and guided all commanders at every level in sea engagements. Engagements themselves took place with only the weakest kinds of communication over long periods of time, in actions spread over many square miles. In such circumstances individual command had to be governed by established but very general orders. In his summary of Rupert's influence on the Royal Navy, Kitson credits him most of all with "the offensive spirit that he inserted into the fighting and sailing instructions. . . . It was the supplementary instructions that he inserted in 1666 . . . which paved the way for admirals of the future . . . to win their great successes" (page 319).

Kitson touches briefly on many other facets of this accomplished man. Rupert was a member of the Royal Society, an enthusiastic inventor, a philomath, an artist, a passionate hunter, a great noble who had the ear of the king, and became a principal figure in the Restoration government. *Prince Rupert* also touches on Rupert's private life, his several mistresses, and their children. It is as an admiral and a great general-at-sea that he is here most remembered.

MICHAEL G. HALL

University of Texas at Austin

BRIAN LAVERY, *Shipboard Life and Organisation, 1731–1815*. Published for the Navy Records Society by Ashgate of Aldershot (England) and Brookfield (U.S.A.), 1998. 656 pages, no illustrations, list of sources, index. ISBN 1-84014-228-6. \$93.95.

Few with an interest in maritime history can be unaware of the Navy Records Society and its 106-year established aim of publishing primary source material on matters relating to the British navy. Few of the 139 volumes so far produced have considered life at sea, so making Brian Lavery's book a welcome addition to the series. Keeping to the same high standard that the society has maintained over the years, Lavery adopts the familiar style of a series of brief introductions followed by minimal editing of selected significant documents. In this case, the core material is taken primarily from the Public Record Office (London), the National Maritime Museum (London), and the Royal Naval Museum (Portsmouth).

Brian Lavery is a well-known contributor to the history of sailing warships, directing much of his earlier attention to the technical aspects of these vessels. Some of his more recent books have shown an increasing interest in general shipboard life, with the current volume apparently representing a pinnacle in this change of interest. Yet, even within the present volume, the technical historian is clearly revealed. While the book is entitled *Shipboard Life and Organisation*, it is the latter topic upon which Lavery concentrates his attention. He is very keen on delving into the structure by which naval crews were managed. For this purpose, the volume begins with a lengthy extract taken from the Admiralty Regulations and Instructions of 1731 which authorized the internal governing of warships for much of this period of interest (1731–1815). As Lavery points out, these regulations were descended from an earlier set of instructions that were laid down by the Duke of York in 1663. As

well as this particular set of Regulations, Lavery also reproduces extracts from the "Additional Regulations and Instructions" of 1750 and new instructions issued in 1806.

While these printed regulations and instructions are important, they tell only of how the British Admiralty expected its ships to be governed. Given that a warship might be at sea for months or even years, with the ability of captains and officers greatly differing, the use of these instructions might vary. For this reason, Lavery goes on to produce a number of shipboard regulations that were compiled by individual captains. From these, a clearer idea begins to emerge of what life was really like on board a man-of-war. A particular eye-opener is that of the captain's orders emanating from HMS *Pegasus*. Written by Prince William Henry, the future William IV, who took command of this vessel in 1786, they show that not only did William have difficulties in managing his officers but that a degree of resentment also existed towards him. Another similarly informative document is St. Vincent's orders for the Mediterranean Fleet (1795–98) which are underpinned by his constant fear of mutiny and the need to punish those who harbored such thoughts.

Documents used by Lavery are primarily those written by senior officers with even the court-martial reports, which supposedly contain the words of the actual seamen, rewritten and edited at the source. Perhaps the only real insight into the thoughts and feelings of the lower deck comes from Lavery's use of petitions, although even here the language is tempered and a tone of deference is forced upon the writer. Perhaps, in remaining true to the title *Shipboard Life*, Lavery needed to go further. Even within the Public Record Office, alternative enlightening material does exist. Indeed, Lavery says surprisingly little about the massive naval mutinies of 1797 and fails to draw on a wealth of material connected with this historical episode. With much of it written by seamen, it includes articles for newspapers, let-

ters to friends and relatives, a huge number of petitions and draft petitions, together with songs composed by anonymous crew members encapsulating the feelings of those involved.

While I am in no way trying to undermine the value of Lavery's work, it is nevertheless a technical offering and one that is much more directed to the issues of management than to that of the lower deck response. However, a full understanding of the lower deck response is not possible without a full understanding of how ships were managed. In achieving this latter point, Brian Lavery must be congratulated.

PHILIP MACDOUGALL
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JAMES WALVIN, *An African Life: The Life and Times of Olaudah Equiano, 1745–1797*. New York: Cassell, 1998. xv + 206 pages illustrations, bibliography, index. ISBN 0-304-702145-5. \$27.95.

Olaudah Equiano's *Interesting Narrative* is perhaps the most useful eighteenth-century black autobiography. Scholars, students, and general readers have plumbed his work for valuable insights about slavery, emancipation, and black society in the Black Atlantic World. An enslaved African who purchased himself by earning and saving money as a bluewater sailor, Equiano rose to become a key, if frustrated, negotiator for the emigration of blacks from London to Sierra Leone in the late 1780s, then, after publication of his narrative, a celebrated intellectual in Georgian England. Although his work lapsed into obscurity after his death, it was revived during the era of abolitionism, then disappeared again, to be revived in the late 1960s. Nowadays several editions are on the market.

Readers will doubtless be fascinated by Walvin's reconstruction of Equiano's seafaring adventures. After his initial captivity into slavery,

Equiano became a sailor working around the West Indies and outside in the Atlantic basin. Readers will enjoy Walvin's recitation of Equiano's friendship with the young white sailor, Richard Baker, who instructed him in life on board ship. After landfall in Falmouth, England, Equiano was placed in the Royal Navy, for which he sailed during the Seven Years War (1756–63), seeing action in battles, suffering from smallpox, and being blown by massive storms. His picaresque life took a new turn after the war when, during a sojourn in London, he became literate and was baptized. Later, after suffering disappointments over a promised manumission, he used his entrepreneurial talents to save cash for a future freedom. On one voyage Equiano bought a glass tumbler, selling the glass at a second port for twice his cost. He invested in gin, transporting alcohol from port to port. Through these infinitesimal exchanges he gradually earned enough money to apply to purchase himself. Although Pascal, his master, had promised a certain sum, when Equiano placed the money before him, the slave holder demurred. Only the intervention of a kindly sea captain convinced Pascal to honor his promises. This saga is but one of many examples in which Equiano overcame adversity with the favors of a friend, or, more commonly, divine intervention.

Now free, Equiano realized that even armed with the manumission document his liberty was always in peril. In such ports as Savannah and Charleston his status was challenged or ignored, and only letters from sea captains and friends at sea saved him from a return to servitude. Of particular interest is Walvin's expert evocation of Equiano's faith, his evangelical beliefs which transcended the normal atheism of eighteenth century seafarers and enabled the black sailor to overcome unexpected adversity and construct an identity as a free African. Such faith was important, because as Jeffrey Bolster demonstrated in his book, *Black Jack*, seamen of color stayed longer at work than whites, and, as age deteriorated

their skills, suffered injury and death. Eventually, Equiano was able to retire in London, write his book, and canvas the British Isles selling it through various editions. Bibliophiles will be intrigued by Equiano's independent bookselling methods and his determination to gain as much income from his life story as possible. It should be kept in mind that Walvin augments Equiano's wonderful tale with superb scholarship. Walvin, a distinguished English historian of slavery, has provided a useful, well-written study of Equiano's work and life. While drawing heavily on Vincent Caretta's edition of the narrative, which he describes as the best available, Walvin adds primary materials drawn from archives around the Atlantic and from the best secondary treatments of slavery. The result is a highly-accomplished companion to the narrative. Teachers may profitably use Walvin's clearly-written and informed book in the classroom.

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VICTORIA BREHM, ED., *The Women's Great Lakes Reader*. Holy Cow! Press, P.O. Box 3170, Mount Royal Station, Duluth, Minnesota 55803; 1998; 404 pages; illustrated, bibliography. Paper. ISBN 0-930100-794. \$18.95.

Once again Victoria Brehm has cast a wide net and brought home a glittering catch. Her first collection of Great Lakes literature was *Sweetwater, Storms, and Spirits: Stories of the Great Lakes* (University of Michigan Press, 1990) in which she argued the Lakes' quintessentiality: their waters may be sweet, but they are rough, untamed waters in the middle of a largely tamed continent, a remaining frontier in the lives of two nations. Moreover, saltwater sailors have often refused to believe that the sweetwater sailors are real sailors at all. This bias has also affected

seaboard editors and critics. Professional writers learned to cast their maritime tales on what Rudyard Kipling tartly called “fully accredited ocean[s]” (page 2). Brehm chose that memorable phrase for her second harvest of Lakes literature, *“A Fully Accredited Ocean”: Essays on the Great Lakes* (University of Michigan Press, 1998), in which she examined commercial and social aspects of the Lakes’ developments.

The Women’s Great Lakes Reader collects writings by and about the women who have lived, worked, played, and died on the Lakes. From the lore and poetry of Native American women, whose people had lived there for nearly ten millennia when the Europeans came upon them in the 1600s, to the accounts of late-twentieth century women still having to prove themselves as, one might say, fully accredited mariners, *The Reader* brings us the very same maritime wonders, fears, triumphs, and disasters known and reported by men, but experienced with different sensibilities and reported in different voices.

Tales of women have been hard to find, most requiring resurrection from correspondence, journals, old newspaper files, and oral tradition. The fundamental difficulty is drearily familiar: little respect for women’s experiences and voices. Combine that longstanding, pervasive attitude with insufficient respect for the Lakes, *et voilà!* a hitherto overlooked niche for history and literature. Brehm brings to this collection her passion for what lies behind the stories. She documents her research most agreeably, skillfully varying commentary with journals, fiction, verse, and illustrations. Yet another bonus is that she is a sailor as well as a scholar; she holds a Coast Guard mariner’s licence to 100 tons for the Great Lakes and Inland Waters.

The Reader comprises five sections. The first is “Anishnaabeg, The First People of the Lakes,” which opens with a century-old photo of two Indian women on Mackinac Island serenely contemplating the photographer. Their people’s skills as boatbuilders, navigators, and fishermen coex-

isted with those of European settlers for roughly two centuries, but were eventually subsumed. The second section, “Women Pioneers on The Frontier,” tells how pioneer women found both danger and freedom in the Lakes. Elizabeth Baird, for instance, was the great-granddaughter of an Indian chief. In 1824, at age fourteen, she married Henry Baird, the first professional attorney to practice in Wisconsin. She describes their voyage, made when she was six months pregnant, from Green Bay to her parents’ home on Mackinaw Island, then returning in October with a six-weeks-old infant. She exemplifies the strength and courage of many pioneer women who faced the Lakes’s hardships and dangers with resolute cheerfulness, recognizing that the frontier allowed them freedoms they might have lacked in more settled communities.

Among others appearing in “Women Travelers on the Lakes” is Ann Davison, the first woman to sail the Atlantic Ocean singlehanded. In 1962 she wrote about her Lakes voyage alone on a seventeen-foot cruiser. Of Georgian Bay, an inlet off Lake Huron, she says, “It looked like the sea and behaved like the sea and gave one the same feeling of its being a sleeping tiger. . . . [its] shores are seashores, and wild northern seashores at that” (pages 228–29). The liveliest section is “Women’s Work,” which deals with the women who earned their way as lighthouse keepers, fishermen, divers, porters, navigators, fancy ladies, pilots, and businesswomen. Consider Madame Laframboise, a “beautiful, intelligent, commanding presence” (page 245) who assumed control of their fur-trading business after her husband was murdered in 1806. She made a fortune competing against John Jacob Astor’s fur traders. The only way Astor could get rid of her was to hire her. In the final section, “Women’s Lives, Women’s Lakes,” Brehm suggests that living on or near the Lakes uniquely marks ordinary as well as extraordinary women. Perhaps.

The value of *The Women’s Great Lakes Reader* is its judicious collection of much history that

might otherwise have been lost because of gender and geographic bias. Its pages will also inform, provoke, inspire, and entertain that legion of readers who prefer tales about great, deep waters over tales about anything else.

JEAN EBBERT
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DAVID CURTIS SKAGGS AND GERALD T. ALTOFF, *A Signal Victory: The Lake Erie Campaign, 1812–1813*. Annapolis: Naval Institute Press, 1997. 244 pages, illustration, appendix, glossary of nautical terms, bibliographic essay, index. Hardcover. ISBN 1-55750-030-4. \$34.95.

With *A Signal Victory*, authors David Skaggs and Gerard Altoft shine the spotlight of thorough historical research onto a strategic dimension of the War of 1812—the Lake Erie Campaign of 1812–13. Since the struggle for control of the Great Lakes has received only passing attention from military scholars until very recently, *A Signal Victory* helps to redress this imbalance.

The story of the Battle of Lake Erie is embedded in American naval mythology. For many, the climactic American victory and the crushing British defeat wrested control of the North American interior from Great Britain and “signaled the emergence of the United States Navy as a determined and competent race among the world’s fleets” (page 183). While this statement has been applied to virtually every American naval victory from the American Revolution on, the Battle of Lake Erie certainly marked a turning point in British and American thinking about the strategic importance of the Great Lakes.

Growing out of a joint conference paper the authors presented in 1988, the book amply fulfills its claim to offer a new analysis of the Battle of Lake Erie and a more even-handed appraisal of the strategic and operational decisions that affected it. Gerard Altoft, a former Coast Guard member, has spent twenty years as chief park

ranger for the National Park Service, the site of Perry’s victory at Put-In-Bay on the Ohio shore. David Skaggs teaches history at Bowling Green State University in Ohio and is a former professor of military history and strategy at the Air War College, Maxwell Air Force Base.

The book offers a balance and informative analysis of the Battle of Lake Erie. It is written clearly and should appeal to a wide range of readers—not just naval specialists. Sources include new archival material from both Canadian and American collections and a thorough review of the existing literature. Although there is a bibliographic essay rather than a full bibliography, the notes are complete.

Skaggs and Altoft offer a refreshing look at the Battle of Put-In-Bay from within the strategic, diplomatic, and social context of early nineteenth century warfare in North America. Part One sets the stage by outlining the comparative strengths of both sides, their respective preparations for battle, including some excellent material on the role of Indian allies, and difficulties of command and supplies. Their analysis of the situation emphasizes that logistical decisions made in one location had a profound impact on another. The British focus on Lake Ontario had disastrous implications for both land and sea forces on Lake Erie.

Part Two examines the preliminaries before the battle, the action itself, and its aftermath. Although there are several new diagrams of ship placements during the course of the battle, a map of the overall area of conflict would have been very useful for understanding the relationship between land and sea forces and their jockeying for position in the months leading up to the battle.

The real focus of the book and one of its strengths is the excellent narrative of the events on board the various ships engaged in three hours of bloody action. Accounts from diaries, firsthand accounts, and official reports are woven together in an exciting and dramatic manner to provide a fascinating series of “snapshots” from the decks of

both sides that manage to be gripping without being sensational. The reader is left with vivid images of fighting at sea, from a wounded pig greedily chasing peas across a damaged deck to horrific injuries endured by crewmen and captains alike.

The final chapter follows the battle beyond its conclusion to discuss its strategic, diplomatic, personnel, and personal consequences. Of particular interest is a discussion of the post-battle animosity that developed between Commodore Perry and Captain Elliott, whose career never recovered from his failure to support Perry's vessel as quickly as he should have at the start of the fighting. As Skaggs and Alton point out, Oliver Hazard Perry lived, died, and remains a national hero while Jesse Duncan Elliott's reputation still suffers from his questionable conduct, to the extent that no American ships have ever been named in his honor.

A Signal Victory fills an important gap in the study of the War of 1812 and sheds new light on an important strategic chapter in this conflict.

FAYE KERT
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BRYAN PERRETT, *The Real Hornblower: The Life and Times of Admiral Sir James Gordon, GCB*. Annapolis: Naval Institute Press; London: Arms and Armour Press. 1997, 160 pages, 16 illustrations, bibliography, index, appendix, \$29.95.

C. S. Forester—*Horatio Hornblower* is “in.” Patrick O’Brian—*Aubrey/Maturin* is “out.” This observation is reinforced by the popularity of the eight-hour, four-part mini-series on British TV in late 1998 and on the American A&E network in the spring of 1999, “*Horatio Hornblower*,” and a new book by Steve Pope, *Hornblower’s Navy* (1998). Forester’s *Hornblower* and Alexander Kent’s *Richard Bolitho* never achieved the “cult” status enjoyed by the nineteen O’Brian—

Aubrey/Maturin sea novels. All take place during the long campaign of the Royal Navy against Napoleon and the French.

It should be noted that the actual events of the period 1795–1805, “the Nelson Decade,” are being commemorated on their bicentennials, major events being jointly sponsored by the Nelson Society, the 1805 Society, and the Society for Nautical Research, e.g., the battles of Cape St. Vincent, the Nile, Copenhagen, and, eventually, the culmination—Trafalgar in 2005. But neither Hornblower, nor Aubrey, nor Bolitho is a Nelson.

In *The Real Hornblower: The Life and Times of Admiral Sir James Gordon, GCB*, Bryan Perrett, author of popular history, contends that James Gordon, who died in 1860 after serving over seventy-five years in the Royal Navy, is, in fact, the model used by C. S. Forester for his fictional depiction of Horatio Hornblower. Forester first wrote about Hornblower after he read several volumes of the *Naval Chronicle*, an “in-house” Admiralty publication describing exploits and achievements of naval officers.

James Gordon, a Scot, entered the Royal Navy in 1793 at age eleven, as did Hornblower. He rose rapidly in rank and responsibility, as did Hornblower: lieutenant in 1800, captain in 1807, and ultimately, Admiral of the Fleet, as did Hornblower. Gordon was present at the Nile (1798), but not at Trafalgar. He was in the Aegean Sea, commanding four British frigates which defeated seven French-Venetian frigates at Lissa. He led another frigate victory at Pelago.

We next see Gordon as a leader in the British naval land campaign in the Chesapeake Bay area during the summer of 1814. Admiral Sir Alexander Cockburn planned a three-pronged operation. Gordon led his squadron up the Potomac River, capturing Fort Washington and the city of Alexandria. This and the return down-river were brilliant achievements of navigation and seamanship.

Gordon rejoined Cockburn off Baltimore and began bombarding Fort McHenry with the inten-

tion of capturing Baltimore. The third prong was the successful overland campaign that ended in the burning of Washington.

Francis Scott Key and a colleague were lawyers negotiating prisoner exchanges and were aboard a British ship when the bombardment occurred. With the fleet were some innovative bomb and rocket vessels, so "bombs bursting [prematurely] in air" and "the rocket's red glare" were authentic. The colleague kept asking Key, "is the flag still there?" It was. The bombardment failed, and America has its national anthem, officially adopted in 1931.

This is how Bryan Perrett "discovered" Gordon. As C. S. Forester had for his Naval War of 1812, Perrett was researching this campaign and ran across Gordon. Perrett contends he has evidence that Forester used Gordon as his model. Others claim Hornblower is a composite figure. Another strong candidate would be Admiral Sir Edward Pellew, the famous frigate captain who figured prominently in the TV miniseries. The exploits and achievements of Gordon are exaggerated by Perrett; Hornblower obviously has a place in popular lore and British naval history. In 1970, the well-known C. Northcote Parkinson published *The Life and Times of Horatio Hornblower*. *The Times Literary Supplement* actually reviewed it as nonfiction!

Forester produced eleven Hornblower novels. The first three books comprised *Captain Horatio Hornblower*. Later volumes covered some of the earlier career, some of the later career, to Admiral of the Fleet, dying in 1857. In 1964 he published *The Hornblower Companion*, just reprinted by Naval Institute Press.

Perrett is a popular historian, preferring the extraordinary, e.g., impossible victories, crucial conflicts, and master strokes, including *Through Mud and Blood* (1975) and *Seize and Hold* (1994).

In this work he refers to "the grand design" of Napoleon (pages 35, 38), the Egyptian campaign of 1798. Wrong! When describing the series of spectacular frigate victories of the American navy,

he combines a Beatty and a Nelson quote: "Something is wrong with our bloody ships, engage the enemy more closely" (page 97). Wrong! Worst of all, he appears knowingly to tick off other naval fiction writers of this era, "Alexander Kent, Patrick O'Brien [sic], and Dudley Pope" (page 148). (Wrong spelling of a major author.)

The book has twelve chapters, twenty-two black and white photos, several maps, and a short bibliography which, curiously, cites only *The Naval War of 1812* by Forester, with none of the eleven Hornblower novels, nor *The Ship*, mentioned in the text, being included. However, an obscure British naval officer was described in considerable detail. I was not convinced of the thesis of Perrett.

EUGENE L. RASOR
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JO ANN ROE, *Ranald MacDonald, Pacific Rim Adventurer*. Pullman: Washington State University Press, 1998. 256 pages, maps, illustrations, bibliography, index. ISBN 0-87422 14&3. \$18.95

On a day late in June 1848 the whaling ship *Plymouth*, Captain I. B. Edwards, hove to off the north coast of Japan and lowered a single boat supplied with water, biscuits, quadrant, anchor, tow line, oars and a chest containing a bible, clothing, books, and stationery. Ranald MacDonald, whaler, clambered in and cast off, setting sail for an island yet invisible, but said by his captain to be within reach off the western shore of Hokkaido.

Today, Friends of MacDonald groups have formed on both sides of the Pacific to celebrate the young man whose mission, at the risk of execution, was to break into a country that had sealed itself off from the world for two hundred years. He had heard while still a child of three shipwrecked Japanese sailors who had drifted across the Pacific to the shore of Washington

State's Cape Flattery. Their story filched his dream to break through the locked gates of Japan to learn Japanese and teach English. His success had greater importance than he could have anticipated, for of the fourteen Japanese who conversed with him for months in Nagasaki, at least three served as interpreters in Japan's 1853 and later negotiations with Commodore Perry. They, as a result of Ranald MacDonald's daring venture, were able to facilitate the opening of Japan to world commerce and cultural exchange.

MacDonald's role in that historic event is becoming recognized. Monuments honor him on both sides of the Pacific—two in the United States' Pacific Northwest and two in Japan. A number of books, including his own narrative published long after his death, tell of his exploits.

Jo Ann Roe presents his life with broad strokes in *Ranald Macdonald, Pacific Rim Adventurer*. She tells of MacDonald's birth on February 3, 1824 to a Hudson's Bay Company clerk, Archibald McDonald, and the great Chinook chief Comcomly's daughter at Fort George (now Astoria), at the mouth of the Columbia River, and of his infancy spent at the Chinook village in the care of her sister after Princess Raven died (Ranald MacDonald and his siblings changed the spelling of the family name). She describes his father's career as a Hudson's Bay Company officer in the undeveloped west, his travels by horseback and canoe over hundreds of miles with his father, stepmother, and siblings from one western outpost assignment to another, and his schooling at Red River settlement, what is now Winnipeg.

Archibald McDonald had hoped that his son might become a gentleman worthy of his Scottish ancestors, and took great trouble with his education. Manners and genteel ways were drilled into the boy despite the primitive conditions the family endured in the west. Although he walked away from a banking career and went to sea in the hope of reaching Japan, Ranald's early training paid off. He was treated kindly in Japan, and, although

confined as a prisoner for almost a year, was respected by men who held his life in their hands.

Ranald had kept a journal which accompanied him when, after considerable negotiation, he was released to the U.S. flagship *Preble* in late April 1849. He resumed the sailor's life, surviving a shipwreck a few months later in which most of his notes were lost. The remainder he delivered to the family lawyer, Malcolm McLeod, in 1853 when he finally returned to visit his family living in Eastern Canada. From the notes and later reminiscences of his adventures in Japan, a manuscript was developed which Ranald and McLeod tried in vain to publish. The story, heavily annotated and edited by William S. Lewis and Naojiro Murakami, finally came out in a limited edition in 1923, but it did not reach general circulation until it was republished in 1990 by the Oregon Historical Society.

Jo Ann Roe, with considerable research, has expanded MacDonald's story to include his adventurous life following that youthful escapade in Japan. The history of the opening of the Canadian and American Wests falls into place as one follows the adventurer in British Columbia from gold diggings to running pack trains to the camps, to developing supply routes, to surveying and exploring for minerals on Vancouver Island, to managing roadhouses, to ranching, and in his final years to settling near relatives at Fort Coville, the site of a Hudson's Bay post that his father had once managed.

The spread of Ranald MacDonald's activities and the recounting of them in this volume are almost dizzying. One needs more than the primitive 1922 map of Central British Columbia and Northern Washington for orientation, as well as a map of Hudson's Bay forts across the continent to follow Ranald's childhood travels. Nevertheless, Jo Ann Roe's book tells a fascinating story in a style that can be enjoyed by a general audience.

JOAN M. GODDARD
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CRAIG L. SYMONDS, *Confederate Admiral: The Life and Wars of Franklin Buchanan*. Annapolis: Naval Institute Press, 1999. 312 pages, 8 photographs, 8 illustrations, 3 maps, notes. \$32.95.

For more than 130 years, the only biography of Franklin Buchanan, the Confederate Navy's only full admiral, was Charles Lee Lewis's *Admiral Franklin Buchanan, Fearless Man of Action*, published in Baltimore in 1929. Lewis's work is a sentimental piece, presenting the subject as a role model and inspiration to future generations. The need remained for a more even-handed biography, one that gives a total portrait of Buchanan examining all aspects of his life and personality, both good and bad.

The gap has at last been filled with Craig L. Symonds's *Confederate Admiral: The Life and Wars of Franklin Buchanan*. Symonds, an instructor at the U.S. Naval Academy, is the author of other biographies of Civil War personalities, and the only person ever to win both the Academy's Excellence in Teaching and Excellence in Research Awards.

Confederate Admiral is more than a biography of an officer, and more even than a contribution to the growing body of literature on the Confederate Navy; it is the story of an important era in naval history. Buchanan's career began in the age of fighting sail, but he is most famous for commanding two all-steam ironclads, the *Virginia* (ex-*Merrimack*) at Hampton Roads, and the *Tennessee* at Mobile, during the Civil War. He received his midshipman's warrant shortly after the close of the War of 1812, learning his trade on frigates, merchantmen, and ships-of-the-line. He commanded both sail and steam. He chased pirates in the Caribbean, fought in the Mexican War, was first superintendent of what became the U.S. Naval Academy, and was the first U.S. officer to set foot on Japanese soil.

Buchanan lived in a time of transition, both for the navy as an institution and the nation as a whole, and on both counts Symonds presents

him as the embodiment of the contradictions of that era. As the naval officer became less a quarterdeck autocrat and more a technician, Buchanan advocated modernization and streamlining. Nevertheless, he was a firm proponent of flogging, applied the lash liberally, and was contemptuous of officers who temporized. He presented himself as a man totally devoted to duty, but was not above orchestrating that duty for his own benefit. In society he was the son of an abolitionist, yet he came to believe that slavery was the natural condition of blacks. As far as he was concerned, anyone in the navy or in society who believed differently was inviting anarchy.

The words "combativeness" and "impulsiveness" appear frequently throughout Symonds's narrative as he shows that, in Buchanan's case, action did not always include careful forethought. Symonds portrays him as an outstanding naval officer but one whose impetuosity often worked against him. Civil War buffs are familiar with how he grabbed a rifle and exchanged potshots with Union soldiers as the *Virginia* withdrew up the river from Hampton Roads, a quixotic gesture that earned him a serious thigh wound. This, however, was only one incident in a life of a man who all too frequently was prone to ill-considered decisions. His touchiness on points of honor, personal morality, and perceived affronts to his dignity unnecessarily made enemies. He ultimately wrecked his career by a hasty resignation that left him little option besides the Confederacy.

As senior officer of the Confederate navy, Buchanan's problems were manifold. From the beginning, he had to deal with the landbound mentality of the government and general public, which gave priority to the army and left the navy to fend for itself. He also was faced with the South's near total lack of an industrial base to support a war. The deficiencies in wartime production and supply become particularly apparent in Symonds's description of Buchanan's efforts to ready the *Tennessee* for service. Even the most basic items like iron plate and guns required

enormous effort to produce and deliver. As the underdog with everything to gain and nothing to lose, the Confederate navy could enjoy the luxury of innovation, but its resources never equaled its vision.

The illustrations and photos in *Confederate Admiral* are interesting, and the maps are adequate. Diagrams of the *Virginia*'s movements at Hampton Roads, and those of the *Tennessee* at Mobile are particularly useful. Longitudinal and cross-section plans of the *Virginia* and *Tennessee* would have helped.

The book is not without some faults. It was annoying, for example, that Symonds felt compelled to interrupt the text with a pronunciation guide to even the most elementary nautical terms (for example, bosun for boatswain).

The parts dealing with Mexico and Texas needed a little more research; Symonds apparently is not familiar with the region. Some of his spellings are obsolete (no one writes "Veracruz" as two words any more). It took a moment to mentally locate the U.S. naval assault at Tabasco, because he refers to the Mexican city as "San Juan Bautista" when standard usage calls for "Villahermosa." He bestows the melodramatic title of *generalissimo* on Antonio Lopez de Santa Ana who, as president, was supreme commander ex-officio, and whose active army rank was *general de división* (major general). He also confuses the prisoners taken at Santa Fe and Mier, during the cold war between Texas and Mexico in the 1840s, with the Texas War of Independence in which Texas POWs were routinely executed.

None of these problems is serious, however. To the contrary, Symonds has made an important contribution, not only to the history of the Confederate navy, but the transitional U.S. Navy. *Confederate Admiral* should be the definitive work on Buchanan and his era for many years to come.

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TRUMAN R. STROBRIDGE AND DENNIS L. NOBLE, *Alaska and the U.S. Revenue Cutter Service, 1867–1915*. Annapolis: Naval Institute Press, 1999. xiv, 223 pages, illustrations, maps, notes, bibliography, index. ISBN 1-55750-845-3. \$32.95.

As the initial date in the title indicates, the Revenue-Cutter Service (one of the predecessors of today's Coast Guard) was involved with Alaska from the time of its acquisition by the United States. To be sure, the term Revenue-Cutter Service would have seemed strange at the time for it was not formally adopted until the 1890s—until then the service was most often known as the Revenue Marine. Indeed, the *Shubrick*, a lighthouse tender serving temporarily as a revenue cutter, had visited Russian America two years earlier, although she was under naval orders at the time. Soon after the ratification of the purchase treaty in 1867, the revenue cutter *Lincoln* departed from San Francisco with a deputy collector of customs and a Coast Survey party embarked, and each year thereafter other vessels of the service followed.

Strobridge, who served as historian at Coast Guard Headquarters, 1970–1976, and Noble, who retired after twenty-three years of Coast Guard service that included several tours in Alaskan waters, begin this story by sketching the history of the service from its inception in 1790, noting the acquisition of additional duties during the decades that followed. The general organization of the book is thematic. This is quite natural because the revenue cutters were the main source of government authority in Alaskan waters, whether functioning in their own right or in providing transportation for representatives of other government agencies.

Strobridge and Noble properly begin with a consideration of the fur seal, which provided the major economic benefit from the new territory until the rapid depletion of the seal herds led to diplomatic crises only finally settled in 1913. Thereafter, they consider the origins and service

of representative officers, mainly Captains Calvin L. Hooper and Michael A. Healy, the latter of whom they consider the practical embodiment of the Bering Sea Patrol. Lieutenant (later Captain) John C. Cantwell is the third officer receiving detailed attention because of his exploration activities on the Kobuk and Yukon rivers. Separate chapters are devoted to search and rescue work and to medical activities on behalf of the native population and merchant mariners. As is today's Coast Guard, the Revenue Cutter Service was torn between its humanitarian duties and those concerned with law enforcement, although especially in the case of the illegal liquor trade, the two went hand-in-hand.

The story is dominated by the almost legendary Captain Michael A. (Hell Roaring Mike) Healy, now famous as the first African American to command a government vessel, whose Alaska service extended from 1874 to 1895 and again from 1900 to 1903. The son of a white Georgia plantation owner and the slave who became his consort, but whom he could not marry, the young Healy was educated in the North. Unlike his brothers, however, he did not enter the Roman Catholic Church, going to sea instead, first in the merchant marine, and in 1865 becoming a third lieutenant in the Revenue Cutter Service. Healy quickly gained a reputation as a skillful seaman and ice navigator. Alcohol, however, proved his downfall. Even while he was zealous in fighting the liquor trade with the natives, he was himself a hard drinker, and reports of inebriation eventually led to court-martial. Sentenced to be dismissed from the service early in 1896, he was spared that fate and later restored to his place on the captains' list. While commanding the *McCulloch* and then the *Thetis*, Healy attempted suicide and exhibited signs of insanity, which led to his retirement in 1903. He died of a heart attack less than a year later. Strobridge and Noble give the fullest account of Healy's enigmatic career that I have seen, yet even they are mystified by some of its events.

Ironically, this very strength is one of the book's weaknesses. Preoccupation with Captain Healy led the authors to ignore such matters as revenue cutter losses, although illustrations on pages 105 and 134 indicate that the *Tahoma* and the *Perry* stranded (in 1914 and 1910) while the *Manning* was badly damaged while under Cantwell's command in 1907. Some minor errors were noted as well, but on the whole, this is a good book that is recommended quite highly.

ROBERT ERWIN JOHNSON
Tuscaloosa, Alabama

GORDON P. MCGOWAN, *The Skipper & the Eagle*. Peekskill, New York: Sea History Press (National Maritime Historical Society, 5 John Walsh Boulevard, Peekskill, New York 10566), 1998. xv + 239 pages, illustrations. ISBN 0-930248-09-0, \$25.00.

When the Coast Guard's sail training ship *Danmark* returned to her native Denmark in 1945, the service was left without a vessel to take her place. The German navy had had two sail training barks, both of which—the *Horst Wessel* and the *Albert Leo Schlageter*—were laid up at Bremerhaven. They had been awarded to the United States as reparations. The navy was not interested in sail training, so the Coast Guard took the first, with the *Schlageter* ultimately flying the Brazilian flag. Gordon P. McGowan, head of the Seamanship Department at the Coast Guard Academy, received orders as prospective commanding officer in January 1946, despite what he claims was an almost total ignorance of handling a square-rigged sailing ship. He had sailed on board the *Danmark* on training cruises in Long Island Sound, but the Danish officers had been responsible for maneuvering the ship.

Just getting to Germany was an experience. McGowan, three other officers, and several petty officers flew out of New York in an Army Air

Force C-54, which showed the effects of rapid demobilization of skilled support personnel. The flight to Scotland required six days, after which bad weather kept them in London for another week. Small wonder that they were determined to make the return passage by sea!

Despite an optimistic report on the *Wessel's* condition, McGowan quickly found that she required a good deal of work, including replacement of her auxiliary diesel. Fortunately, his supply officer had been born in Germany and proved to be capable of unearthing, sometimes literally, virtually everything that was required, including a new engine. Manpower was another matter. Like all the armed services, the Coast Guard was critically short of personnel, and the British naval officers in charge of the former Kriegsmarine were notably unfriendly to their American counterparts. When McGowan met the British commodore, however, the latter noticed the gold shield on his uniform sleeve and knew its meaning—he had admired the work of Coast Guard rescue boats during the Normandy invasion. The commodore transferred the former *Horst Wessel* crew to the newly rechristened *Eagle*, and together with a detachment of Coast Guardsmen whose acquaintance they had already made, they formed an adequate ship's company.

The second half of the book describes the *Eagle's* passage to the United States by way of Falmouth, Madeira, and Bermuda. Although inclement weather kept her in Falmouth longer than expected, she enjoyed a tranquil crossing to Bermuda, during which her American crew and, one suspects, her captain learned to handle a ship under sail. Perhaps the latter learned too well—leaving Bermuda, he allowed himself to be talked into ignoring threatening weather signs in order to make New York as quickly as possible. The result was that the *Eagle* sailed into a hurricane, which tested the ability of captain and crew alike. Both were equal to the occasion, as was the ship, which weathered the storm with little damage other than a few blown-out sails.

McGowan tells a good story, which should appeal to those even slightly interested in the sea. His accounts of life in immediate postwar Germany and of the visits to Madeira and Bermuda are entertaining, and he gives full credit to his subordinates. Those familiar with the German language may find such spellings as "Vass iss loss?" (Page 1) and "fraulines" (page 69) surprising; obviously McGowan's command of German was not impressive. That, however, is virtually the only thing I can find to criticize, which is ample testimony to the book's merit.

The *Skipper & the Eagle* was originally published in 1960 and has long been unavailable. This new edition has an introduction by Peter Stanford, president of the National Maritime Historical Society, and an afterword by the captain in command when she sailed to Germany in 1996 to celebrate her sixtieth birthday and the fiftieth anniversary of her commissioning in the Coast Guard, as well as a note on names and people, a list of commanding officers, the *Eagle's* itinerary during her Coast Guard service, the report of the transatlantic cruise by Kapitänleutnant Barthold Schnibbe, and some more recent photographs. Highly recommended.

ROBERT ERWIN JOHNSON
Tuscaloosa, Alabama

ALAN BURN, *The Fighting Commodores*. Annapolis: Naval Institute Press, 1999. 256 pages, black & white photographs, 2 maps, notes, index. 6 x 9½", cloth. ISBN 1-55750-283-8. \$34.95.

During World War II Allied merchant ships, operating primarily in convoys, carried hundreds of thousands of men and millions of tons of supplies across the Atlantic through the North Sea or across the Arctic Ocean to northern Russia. Significant military dangers, including U-boats, mines, surface raiders, aircraft, and E-boats, confronted every convoy. The many permutations of

weather also endangered the convoys: storms, heavy seas, freezing air, ice, and water cold enough to kill in five minutes.

Convoy commodores, assisted by small staffs of signalmen and yeomen, guided the merchant ships of the convoy. Many commodores were senior Royal Navy officers who left comfortable retirements to serve Great Britain in a time of great need. *The Fighting Commodores: Convoy Commanders in the Second World War* by Alan Burn sets out to tell the story of these officers.

Along the way, however, Burn loses track of the commodores as men and leaders as he recounts the histories of several convoys which suffered some of the most devastating U-boat attacks of the war. Amidst compelling accounts of U-boat tactics, signal decryption, torpedo attacks, and sinking ships, Burn's narrative allows the commodores to become two-dimensional characters who seem to do little more than order emergency turns and scramble into lifeboats from the wreckage of their torpedoed ships. Such, of course, was not the case in real life.

Because Burn has selected the extreme end of the spectrum of convoy operations, those convoys most severely mauled by U-boat wolfpack attacks, the reader does not learn the workings of the typical routine convoy in which all the ships got through. The effect is to make every convoy seem a disaster when actually the convoy system proved among the most successful methods of defeating the U-boat threat. As Burn notes, on average only one out of every thousand ships in convoy was lost.

Burn makes sparing use of the commodores' wartime letters, diaries (granted that these were either censored or prohibited), post-war interviews, or writings. Thus, the reader unfortunately lacks the highly desirable first-person material that would have provided insight and more details about the enormous burdens and difficulties the convoy commodores grappled with every hour they and their unwieldy charges were underway.

The Fighting Commodores combines Burn's personal knowledge of events and conditions with research in both British and German archives. Although the book includes fourteen pages of source notes, they are primarily explanatory or anecdotal, only occasionally citing references for statistics or assertions. The book does not have a bibliography.

The Fighting Commodores was originally published in England. Americans reading it may have some difficulty with its British expressions and naval phrases, the meaning of which can be difficult or impenetrable and require reference to outside sources. More maps, and especially charts to support the specific convoys Burn has used as examples, would have been helpful.

Burn served as an Ordinary Seaman on Atlantic convoys at the beginning of World War II and later was commissioned in the Royal Navy. As the publisher explains at the book's beginning, Burn suffered a severe stroke when he was near the completion of this book. Confined to a nursing home, he was unable to bring the manuscript to the degree of polish which he would have otherwise have desired.

While *The Fighting Commodores* does not put the reader inside the mind and heart of a World War II convoy commander, it does contribute an interesting overview to the significant challenges of supplying an island nation in wartime and to the organizational problems and physical dangers faced voluntarily by the men who led convoys across perilous seas.

WILLIAM GALVANI
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Keyport, Washington

ALAN HARRIS BATH, *Tracking the Axis Enemy: The Triumph of Anglo-American Naval Intelligence*. Lawrence: University Press of Kansas, 1993. xii + 308 pages Notes, selected bibliography, index. ISBN 0-7006-0917-2. \$34.95.

Tracking the Axis Enemy is a book about process: the process of sharing naval intelligence among the Allies of World War II, principally Britain and the U.S., but including also Canada, Australia, and New Zealand. Although the subtitle suggests the process resulted in triumph, Alan Harris Bath is more modest in his claims than have been some recent intelligence histories. While he does consider the Battle of the Atlantic a major victory for naval intelligence (among other factors), he also acknowledges that "intelligence was obviously not" (page 234) the key to winning the war. He argues that the success of Allied intelligence cooperation—especially when measured against the briefly mentioned failure of Axis intelligence-sharing—certainly shortened the war, maybe by as much as two years. What emerges as the real triumph and the main focus of the book is the achievement of arguably the closest and most productive levels of cooperation ever reached between two sovereign powers. This cooperative relationship, which made possible the successful exploitation of their combined intelligence assets, was all the more surprising considering, as Bath notes, the traditional paranoia of intelligence organizations.

Alan Bath is in a position to appreciate the difficulties of achieving such cooperation. As a former intelligence officer who served in the U.S. Navy from 1951 to 1983, Bath is admirably suited to interpret and to assess his sources, which he does convincingly in this dense, detail filled, extensively documented account. As a result, he not only chronicles the development of what Churchill called the "special relationship" (page xi), from initial informal liaison to formal intelligence sharing, but he also reveals how and when the relationship faltered, as it often did.

Bath's impressive synthesis ranges over all aspects of Anglo-American naval intelligence cooperation, at all levels of decision making, and in all theaters of war. He considers the influence of individuals, from key players at the highest levels, such as Roosevelt and Churchill, to little-

known intelligence officers in remote Pacific outposts. Noting the critical wartime needs of the British that overrode normal suspicions, he demonstrates convincingly that it was they who were, for the most part, the initiators of the relationship. He also examines domestic political issues among the Allies which affected information sharing; the influence of army, air force, and diplomacy needs; differing national cultures and changing national priorities; and, finally, the negative effect on cooperation of increasing concern over postwar goals.

The bulk of the book, however, is devoted to tracing the course of the complex relationships among the Anglo-American, Canadian, Australian, and New Zealand naval bureaucratic institutions set up to handle the collection, analysis, and dissemination of naval intelligence. Bath clearly describes the origins, structure, and personnel of each these organizations, and documents in great detail the actual mechanics of intelligence sharing. He also discusses each of the several different kinds of intelligence shared, including codebreaking, direction finding, radio traffic analysis, prisoner interrogation reports, and photographic interpretation.

Tracking the Axis Enemy demonstrates how the different naval operations of the war affected, and were affected by, the pattern of intelligence relationships among the Allies. Cooperation between the U-boat tracking centers of the British, American, and Canadian navies contributed to victory against German U-boats in the Atlantic, while intelligence sharing in the U.S.-dominated campaign against the Imperial Japanese navy in the Pacific was mostly halting and unsuccessful. There the vast distances, rivalries among the different commands, and different strategic goals of the Allies hindered cooperation.

Bath draws on an extensive range of published works and primary sources, many of them newly released to build his case. He has consulted archives in the United States, the United Kingdom, and, more unusually, in Canada,

Australia, and New Zealand, and the scope of his research is impressive in depth as well as breadth. The almost day-by-day account of unfolding relationships among a vast number of people and organizations sometimes makes this book a difficult read. The reward, however, is an unsurpassed view of an extraordinary effort to cooperate in intelligence sharing among a number of Allied powers locked in a bitter war against dangerous enemies.

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EDWARD L. BEACH, *Salt and Steel: Reflections of a Submariner*. Annapolis: Naval Institute Press, 1999), xiii + 299 pages, cloth, 13 black and white photographs, index. ISBN 1-55750-054-1. \$34.95.

Autobiographies that reach beyond their author and provide insights into the times and serve as a backdrop for the unfolding of significant events are commendable. This is the vein of Edward Beach's work. Written in an appealing style, it offers solid reflection on important naval events. Moreover, Beach seeks to have his "ruminative ideas . . . folded into the pantheon of our U.S. Navy of the future" (page 271).

Subtitled *Reflections of a Submariner*, Beach shows great breadth as he recounts incidents in an important period of U.S. Navy transition. Particularly from the attack on Pearl Harbor to the present, Beach's positions seem thoroughly thought through. Admiral Husband Kimmel was made a scapegoat for the debacle of Pearl Harbor, but the appointment of his successor, Chester Nimitz, was brilliant, Beach asserts unequivocally. He concludes that "Pearl Harbor crowned the carrier as the new Queen of Battle" (page 63), and since then he has remained confident that aircraft carriers and their aircraft armed with atomic weapons provide essential flexibility for U.S. national projection of power. Not surprisingly, he

is a strong advocate of not only nuclear carriers, but of nuclear-powered submarines as well.

Throughout the Second World War and afterward, his varied tours of duty placed him in advantageous positions to observe and sometimes participate in significant events. For example, his twelve war patrols in submarines in the Pacific speak eloquently of his distinguished combat experience. He then became aide to the Chief of Naval Personnel for a year and a half, after which he remained in Washington as the "Resident Submariner" in the Atomic Defense Section of the Navy Department. He soon came into contact with the then Captain Hyman Rickover. Beach took the initiative by drawing up "a proposal for a nuclear-powered submarine" (page 175). Although his proposal had a difficult time in the Navy's bureaucracy, in 1948 Beach's "Helping Rickover," as the chapter is titled, was not without meaning to the hard-driving Rickover and his mission to build nuclear-powered submarines.

At sea again, Beach commanded the new high speed, snorkel, diesel-electric submarine *Amberjack* (SS-522). (Later, I served for nearly three years in the similar USS *Pickerel* [SS-524].) The boat was the state of the submarine art before the launching of the nuclear-powered USS *Nautilus* (SSN-571) in early 1954, and Beach found the command "an unmitigated pleasure," but he did not keep command of the "wonderful *Amberjack*" for long. In 1949 he received direct orders from the Navy Department to return to Washington to serve on the staff of General of the Army Omar Bradley, who assumed the newly created post of chairman of the Joint Chiefs of Staff. Beach was thrown into the thick of what is known as the "Revolt of the Admirals," a struggle mainly between the air force and the navy over the former's quest to obtain a monopoly over the delivery of strategic (atomic) weapons.

Beach and the navy believed "that aircraft flying from carriers could deliver a nuclear weapon as well as the new and untested B-36, in many instances better, and that the B-36 itself was

vulnerable to carrier-based or land-based fighter planes, or to new antiaircraft measures in general" (page 202). While the Chief of Naval Operations was obligated to resign at the conclusion of the struggle, with the outbreak of the Korean War in 1950, the worth of carriers was proved immediately once and for all.

Already with a distinguished career by any measure, Beach returned to sea—this time in the early 1950s to command the *Trigger* (SS-564). Soon, however, President Eisenhower called on him to be his naval aide. "My four years as naval aide to the president of the United States were of course a wonderful, heady time" (page 225). Still other notable duty assignments came, not least of which was his command of the USS *Triton* (SS[R]N-586), the fifth nuclear submarine to be built. He took the *Triton* on a submerged voyage completely around the world, also a heady experience, one suspects!

With such rich experiences in the navy, Beach's concluding chapter, "Ideas for Our Navy's Future Years," deserves serious consideration. He makes a strong case that the missile-firing submarine is the ultimate warship. Furthermore, he has provocative ideas for changing naval rank structure and reducing staff as well as reducing personnel turnover. On balance, Beach is an excellent read with much to say.

CARL BOYD
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MARVIN POKRANT, *Desert Storm at Sea: What the Navy Really Did*. Westport, Connecticut: Greenwood Press, 1999. 329 pages, illustrations, index, bibliography. ISBN 0-313-31024-6. \$59.95.

The U.S. Navy, like Rodney Dangerfield, often does not get the respect it deserves for its considerable contributions to the success of American arms in the modern era. It is not uncommon for commentators to speak of the

navy in the Gulf War as merely an "adjunct to the U.S. Air Force."

Marvin Pokrant's *Desert Storm at Sea: What the Navy Really Did*, a companion piece to his earlier work, *Desert Shield at Sea: What the Navy Really Did*, goes a long way toward correcting that misperception. He provides an exhaustive analysis of naval surface actions in the northern gulf, amphibious planning and operations, mine countermeasures, naval gunfire support by battleships *Missouri* and *Wisconsin*, maritime interception operations, SEAL beach reconnaissance and search and rescue actions, and the fleet's air defense of the coalition's right flank, as well as air operations in Iraq and Kuwait.

Pokrant, a senior analyst whom the Center for Naval Analyses posted to the staff of Commander U.S. Naval Forces, Central Command during Desert Shield and Desert Storm, speaks with authority. He was present at numerous meetings and briefings in which Vice Admirals Henry H. Mauz Jr. and Stanley R. Arthur, successive commanders of U.S. naval forces in the Central Command theater, planned and directed the fleet's operations. We learn about Arthur's heated disputes with Army General Norman Schwarzkopf over the sinking of Iraqi oil tankers in the Gulf and with Air Force General Charles Horner over the allocation of aerial refueling planes for Navy strike groups. Pokrant discusses the high and low points of inter-service relations, especially with regard to the functioning of the Joint Force Air Component Commander and Air Tasking Order systems. Right on the mark are his conclusions (shared by Arthur) that one of the fleet's most important missions was to deceive Saddam Hussein into believing that U.S. naval forces would mount an amphibious assault against his seaward flank; that COMUSNAVCENT and his headquarters should have been established in Riyadh; that the Red Sea carrier battle force was better integrated into the air war than the Persian Gulf battle force; that the Central Command staff did not under-

stand the capabilities or requirements of naval forces; and that the Navy had little control over SEAL operations. Overall, Pokrant treats Navy operational successes and failures in a candid, judicious manner.

In addition to Pokrant's personal experiences, *Desert Storm at Sea* is based on interviews with many of the naval leaders involved in the Gulf War and a wealth of action reports, operational messages, briefing notes, and other primary materials gathered by the Center for Naval Analyses to support its analysis of the conflict. The result of that effort, eighteen initially classified studies of navy and Marine Corps operations, also provided him with a strong base of support. It is not evident, however, that he made use of the oral histories and studies relating to Desert Storm held in the Operational Archives of the Naval Historical Center. The work would also have profited from greater use of interviews and primary sources reflecting the views of the air force and army officers on the subject of command and control issues and joint operations.

That being said, this work should be on the bookshelf of every professional naval officer, for it

is a detailed investigation of navy operations in the Gulf War. The first section of the book presents a narrative description of events and the second section Pokrant's balanced, well-reasoned and cogent observations. Appropriately, he does not claim that the work covers the diplomatic, political, social, or broader aspects of the Gulf War experience.

Desert Storm at Sea provides ample support for the conclusion that the U.S. Navy made a major contribution to the successful U.N. campaign to eject the Iraqi invaders from Kuwait. The naval services experienced numerous operational difficulties but overcame them and, more importantly, improved their ability to handle future multinational and joint-service operations in the contentious post-Cold War world. To quote Admiral Arthur, who penned a foreword for the book, "naval forces at sea were full partners in the coalition victory of Desert Storm."

EDWARD J. MAROLDA
Montclair, Virginia

~~ SHORTER NOTICES ~~

by Briton C. Busch

MENSUN BOUND, ED., *Excavating Ships of War*. Oswestry, Shropshire: Anthony Nelson, 1998. International Maritime Archaeology Series, 2. 309 pages, illustrations, maps, charts, index. ISBN 0-90461-453-0. Paper, \$82.50. Distributed by David Brown Book Company, Post Office Box 511, Oakville, Connecticut 06779.

As with Volume I of this series, *The Archaeology of Ships of War*, this volume is based in

part on a 1992 Greenwich conference. The first volume concentrated on ordnance, ship preservation, and excavation; Volume II is devoted almost exclusively to excavation. Twenty-seven separate chapters consider a wide geographic and chronological range of vessels, from a fifteenth century wreck off Sardinia to the underwater archaeology of World War II in the Pacific. Most, however, discuss wrecks of European vessels, primarily in European waters, from the sixteenth (4), seven-

teenth (4), eighteenth (12), and nineteenth (2) centuries. Three papers deal with wrecks in American waters of the well-known vessels *Hamilton*, *Scourge*, *Somers* (actually off Mexico), and *Monitor*. Each chapter is by an expert, and each is provided with multiple black-and-white illustrations of the excavation process and recovered artifacts together with a brief bibliography. Editor Mensun Bound provides an introductory essay on "British sea power: ships, armament, strategy and tactics," though in fact ten of the vessels discussed were not British at all. Nevertheless, the two volumes together provide a comprehensive look at underwater warship excavation in the 1990s.

KEVIN J. CRISMAN AND ARTHUR B. COHN, *When Horses Walked on Water: Horse-Powered Ferries in Nineteenth-Century America*. Washington, D.C.: Smithsonian Institution Press, 1998. xviii + 292 pages, appendices, notes, illustrations. ISBN 1-56098-843-6. \$37.50.

Seldom remembered but of vital historical importance were the many hundreds of nineteenth century horse ferries across rivers, lakes, and bays, providing reliable and inexpensive transport where manpower used on other kinds of ferries was limited and steam power too costly and too dangerous. How they were built and where and how they functioned is an interesting tale, told in a well-written and nicely produced volume (as is to be expected from the Smithsonian Press), which draws extensively upon archaeological evidence. Several appendices and a comprehensive bibliography add to the utility of this important contribution to the history of America's inland waterborne commerce.

NICHOLAS A. LAMBERT, ED., *Australia's Naval Inheritance: Imperial Maritime Strategy and the Australian Station, 1880–1909*. Canberra:

Maritime Studies Program, Department of Defence (Navy), 1998. Papers in the Australian Maritime Affairs, 6. x + 200 pages, illustrations, appendices.

Nicholas Lambert has here collected about fifty important documents which illustrate the history of the Australia Station before the creation of the Royal Australian Navy in 1911. Most demonstrate concerns over the protection of trade, as might be expected, but a number of these primary sources relate to the interaction of British and Australian authorities on precisely how an Australian defense force should—or should not—be created and paid for, and just how much control should be in Australian hands of Australia's maritime defense needs. For those interested in Australian naval history, or in the further reaches of British naval power in the quarter-century prior to World War I, this will prove a valuable collection. Editor Lambert has provided a useful twenty-page introduction which puts the documents into a general context.

KIRSTEN LANGENBACH, *Eisenzeitliche Schiffsäusrüstung im Bereich von Nord- und Ostsee*. Bremerhaven: Deutsches Schiffahrtsmuseum, and Hamburg, Kabel Verlag, 1998; Schriften des DSFM, volume 49. 220 pages, bibliography, illustrations. ISBN 3-822500451-3.

Kirsten Langenbach's 1991 Münster doctoral thesis, now published in an enlarged and well-illustrated edition, is a detailed overview of the state of archaeology concerning iron-age ships and artifacts in the North Sea-Baltic region. In addition to vessel types and locations, chapters are devoted to the daily life lived aboard by the sailors and shore-side support services. A comprehensive catalog (pages 168–199) lists eighty-seven sites and collections in Ireland, Britain, Belgium, the Netherlands, Germany, Denmark, Norway (by far the largest share), Sweden, Poland, Russia,

and Iceland. The volume, in German throughout, is completed by a comprehensive bibliography in many languages.

H. T. LENTON, *British and Empire Warships of the Second World War*. London: Greenhill Books; Annapolis, Naval Institute Press, 1998. 766 pages, illustrations, appendices, index. ISBN 1-55750-048-7. \$125.00.

This massive, oversized tome (9 x 11") will surely be regarded as the definitive reference volume on individual British and empire warships of World War II. For nearly forty years Trevor Lenton has collected data and published numerous books on warships of various nations; this volume thus represents something of a lifetime's work. The entries range from battleships to the smallest support vessels and landing craft, each provided with information on such topics as displacement, dimensions, machinery, armament, complement, other vessels of the class, and "fate." If there is one drawback, it is the lack of an index or other finding guide to those vessels which were indeed of the "empire" category. Well over six

hundred photographs and various appendices (including one on pendant numbers) complete a most impressive accomplishment. Although the price may seem high, given the size and scope of the work it is in fact something of a bargain for a work indispensable to any World War II navy reference collection.

CALVIN WINSLOW, ED., *Waterfront Workers: New Perspectives on Race and Class*. Urbana: University of Illinois Press, 1998. viii + 204 pages. Index. ISBN 0252023927 (hardcover), \$49.95, 025206691X (paper), \$17.95.

Intended mainly for labor history specialists, this collection still has utility for maritime history generalists. E. Arnesen studies "Biracial Waterfront Unionism in the Age of Segregation," while editor Winslow focuses upon the New York Longshoremen in the 1907 strike, and C. Davis on the same subject in 1948. H. Kimeldorf outlines the history of "Wobbly Unionism" on the Philadelphia docks, and B. Nelson concludes with an essay on race relations among West Coast longshoremen in the era between 1933 and 1961.



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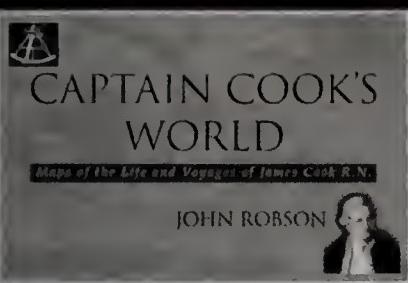
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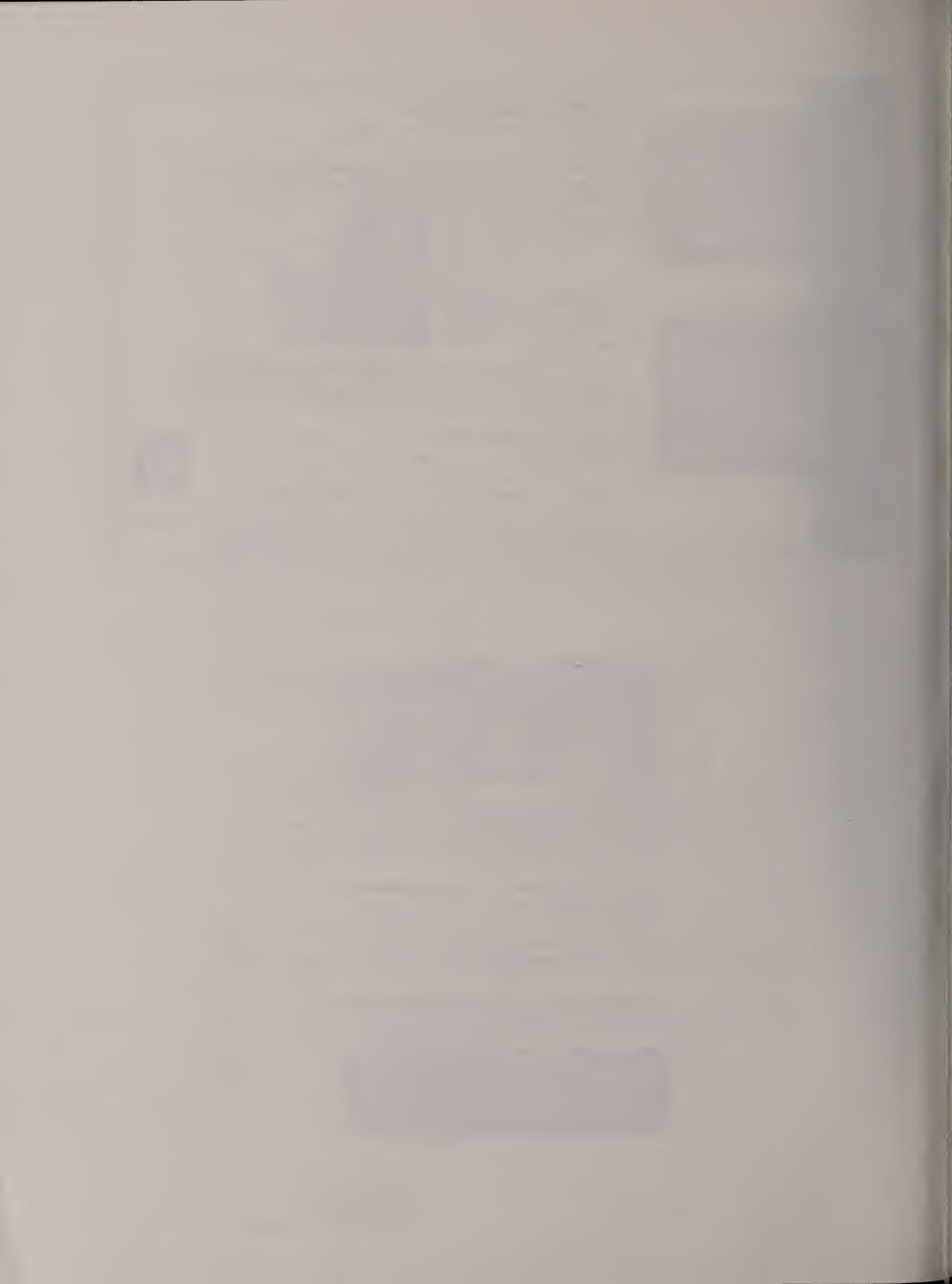
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